

**Green Zia Environmental Excellence Program**  
**Achievement-level Application:**  
**LOS ALAMOS NATIONAL LABORATORY**  
**HUMAN RESOURCES DIVISION**

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# **Green Zia Environmental Excellence Program**

## **Achievement-level Application:**

### **LOS ALAMOS NATIONAL LABORATORY**

#### **HUMAN RESOURCES DIVISION**

## **Organizational Overview**

### **0.1 Basic Organizational Description**

Los Alamos National Laboratory (LANL) is owned by the US Department of Energy (DOE) and operated under contract by the University of California (UC). Established in 1943 as part of the Manhattan Project, LANL's original mission was to design, develop, and test nuclear weapons. As technologies, U.S. priorities, and the world community have changed, LANL's mission has broadened to enhancing global security by ensuring safety and confidence in the U.S. nuclear weapons stockpile, developing technical solutions to reduce the threat of weapons of mass destruction, and improving the environmental and nuclear materials legacy of the Cold War. In addition, the Laboratory applies its scientific and engineering capabilities to assist the nation in addressing energy, environment, infrastructure, and biological security problems.

As a subunit of LANL, the Human Resources (HR) Division has formally adopted the following mission:

LANL's HR Division provides leadership and support that unifies and strengthens the workforce's ability to support the LANL mission.

Overall LANL funding for FY00 was \$1.56 billion. The FY00 budget for HR Division was \$26.3 million, or about 1.68% of LANL's total funding. At the end of FY00 LANL employed 8,932 UC employees divided among 45 division and program offices. HR Division employed 203 UC employees, roughly 2.27% of the LANL workforce.

The division's major products and services serve as the organizing focus of operations, as Figure 0-1 shows. Key products and services include

- compensation and benefits management,
- staff relations assistance,
- staffing support,
- training and development.

At the end of FY00, HR employed 253 total workers, including UC employees and contractors. The majority of HR Division employees—about 40 %, approximately 100 employees in all—are located in one

large administrative office structure, the Otowi Building, in LANL's main technical area. A smaller number of employees are housed in another office building across town. The staff providing distributed services are housed in facilities scattered across LANL's 43 square miles.

Other major tenants of the Otowi Building are the Business Operations Division (250 employees) and a food service, ARAMARK Corporation (50 employees). The building's total occupancy is 640.

The Otowi Building was commissioned in 1981. Heat is supplied by a variable air volume system. The main air conditioning system is an air wash evaporator, with supplemental cooling for computing installations furnished by means of water chillers.

At the time of Otowi's commissioning, its services were state of the art, but modern power demands—especially for computing—make energy conservation not just a good idea but an absolute necessity. See Item 1.1 for information on the Otowi Energy Systems Retrofit and its associated pollution prevention (P2) and energy efficiency (E2) dividends.

HR Division is actively implementing a comprehensive environmental management system, based on the concept of continuous quality improvement (CQI). A process map of the system appears in Figure 0-2. The functionality of the environmental management system depends on

- internal initiatives under the leadership of the HR Environment, Safety, and Health (ES&H) Officer, who also serves as the HR Green Zia Pilot Project (GZPP) Officer;
- partnering with a wide range of Laboratory organizations and external stakeholders.

The GZPP previously cited was undertaken to spur internal P2/E2 initiatives and are discussed in Items 3.3, 5.2, and 7.1. Initiatives, which are driven by stakeholders, are carried out through an extensive partnership network. Our principal environmental management partners are

- DOE, LANL's main customer;
- regulatory agencies, including the Environmental Protection Agency (EPA), the

New Mexico Environment Department (NMED), and the Occupational Safety and Health Administration (OSHA);

- the northern New Mexico community;
- the resident LANL Environmental, Safety, and Health Division (ESH) Industrial Hygiene and Safety group;
- the ESH Training group;
- the ESH Quality Management group;
- the LANL Safeguards and Security Division (S) Emergency Management group;
- fellow Otowi tenants, especially BUS Division and ARAMARK Corporation;
- the LANL Facility and Waste Operations Division (FWO) Distributed Facilities group (DF).

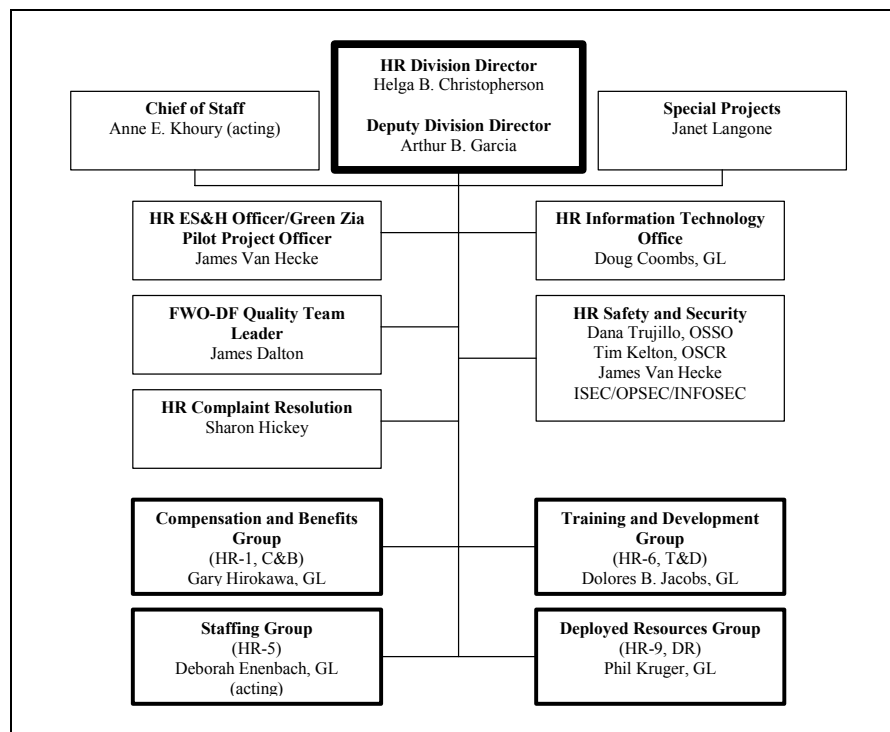
HR GZPP initiatives are promoted division-wide, among personnel posted throughout the LANL complex. However, to the extent that the Otowi Building is our main facility, partnering with FWO-DF is a key factor in successful implementation of the HR environmental management system. As the Otowi physical plant manager, the FWO-DF Quality Team

brings together all the building's tenants and coordinates implementation of P2E2 projects facility-wide, not only in its championing of the Otowi Energy Systems Retrofit (see Item 1.1) but also in initiatives that are cited throughout this application, such as

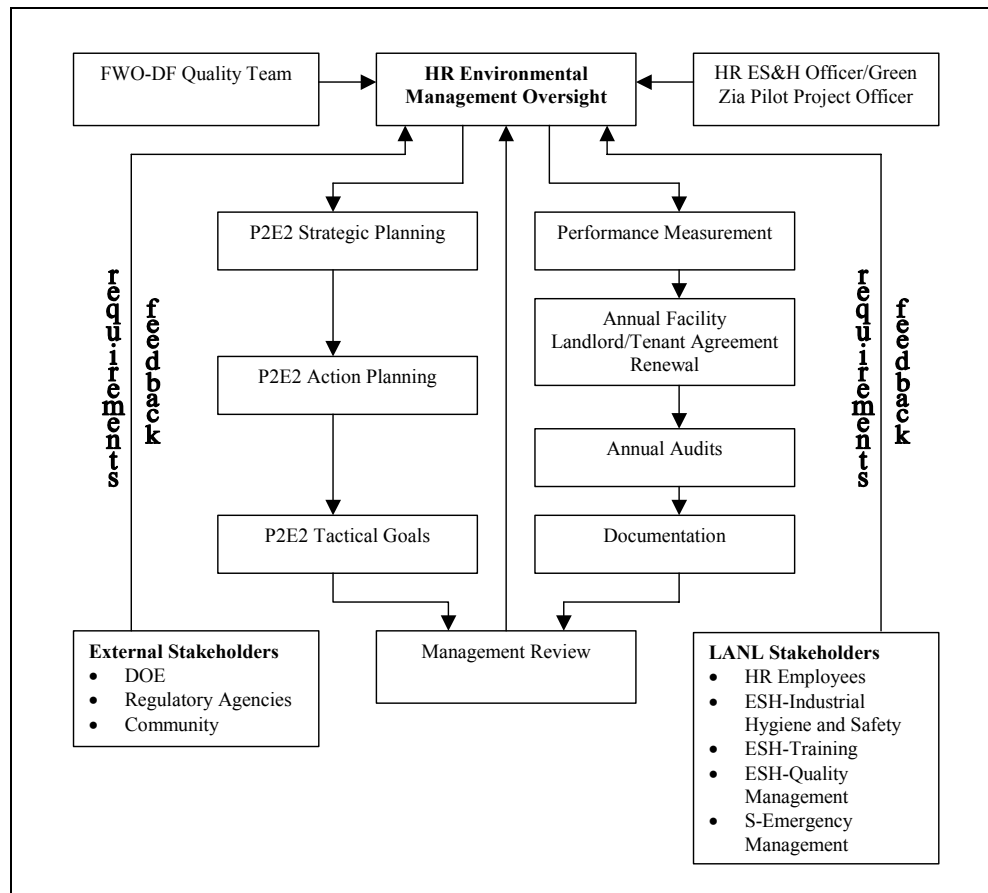
- site-specific utilities conservation training,
- sanitary waste tracking,
- used carpet recycling,
- employee feedback.

HR Information Technology is the division's key support function. Distributed Services is the major service delivery interface for HR and is the HR organization responsible for coordinating long-term relationships between selected HR staff and LANL customer groups.

HR Division delivers products and services in two ways: centralized, or "core," support and decentralized, or "field," support using the distributed service model. Establishing distributed human resources services means co-locating HR employees with technical customers, a process that enhances and strengthens HR Division's relationships with customers and enables the division to better respond to and anticipate customer needs. Nearly 25% of HR Division staff provide decentralized support.



**Figure 0-1. HR Division organizational chart.**



**Figure 0-2. The HR environmental management system.**

In addition to the HR mission cited above, the division has identified three core values:

- **People**—LANL's greatest asset is its people. Virtually everything of consequence, good or bad, happens through people. The members of our workforce can achieve their full potential as individuals and contributors to our success only if they find challenge and fulfillment in their work. We provide a safe, healthy working environment in which integrity, ethical behavior, and respect for one another are paramount in all our interactions.
- **Products/Services**—HR's products and services are successful only if our customers view them as such. We are dedicated to achieving continuous improvement in customer satisfaction through a commitment to excellence in the development, implementation, and support of world-class HR products and services in a high-quality, cost-effective, consistent, fair, safe, and timely manner.
- **Community**—We operate in an environment in which we must be highly sensitive and responsive to the needs of our workforce, our retirees, DOE, UC, taxpayers, and the external community.

HR Division has also established fourteen Guiding Principles, all of which have direct application to the division's focus on environmental issues.

- Quality and safety come first.
- Our goal is never-ending improvement in customer satisfaction.
- We work together as a team.
- Teamwork is the way we make decisions.
- Other organizations are part of our team.
- Decisions are made by the appropriate content expert.
- We make change our ally.

- Employees have the right to as much information as possible about their job and the Laboratory.
- We hold ourselves and each other accountable.
- Every activity and process is an integral part of the operation of HR.
- Mistakes are not "someone's fault."
- We manage our work by facts.
- We are never satisfied with "good enough."
- We approach our jobs with a sense of urgency.

Federal regulatory agencies with oversight for various LANL operations include EPA, DOE, OSHA and the Nuclear Regulatory Commission (NRC). NMED also oversees and regulates LANL activities. Because most HR Division employees work in a typical administrative office environment, in day-to-day operations OSHA requirements related to employee safety and health are most applicable to HR Division. In addition to regulatory expectations, LANL operations—including HR Division performance—are regulated and evaluated by contractual requirements negotiated by DOE, UC, and LANL. These requirements, revised annually, are contained in Appendix F of the operating contract and provide a broad range of specific goals, measures, and evaluation criteria. Appendix F serves as a key method of determining both customer expectations and organizational performance.

The most recent modification of Appendix F identifies specific ES&H performance measures for LANL, embodied in Section I-2 1.2.c.1, Waste Minimization, Affirmative, Procurement, and Energy and Natural Resources Conservation. This performance measure requires LANL to

- reduce solid sanitary waste by 8% compared to an FY00 baseline;
- recycle 18% of solid sanitary waste;
- purchase EPA-designated items with recovered content;
- trend electricity, water, and natural gas consumption over three years;
- develop a trending system for fleet efficiency, ozone-depleting substance inventory, and greenhouse gas emissions;
- identify P2 opportunities by means of Green Zia tools.

The appendix also identifies a body of performance measures for HR Division (Section I-6), but not in the area of ES&H.

HR Division views its three key processes—people intake, people maintenance, and people outgo—as part of an integrated system that incorporates LANL's mission, vision, strategic direction, and tactical goals; the DOE contractor strategic goals; the applicable provisions of the UC/DOE contract; and customer input. Planning and management and the organizational infrastructure are framework and supporting mechanisms within which the system operates. (See Figure 0-3.)

Items 0.2 and 0.3 contain additional information on P2E2 support from HR's intra-LANL partners.

## **0.2 Customer and Interested Party Requirements**

HR Division has identified four broad groups of customers:

- LANL employees—including applicants, prospective employees, and retirees;
- LANL managers—including senior management;
- HR Division employees;
- stakeholders such as DOE, UC, and the surrounding communities and pueblos.

Each group of customers has a specific set of expectations for HR Division, as Table 0-1 shows. Because of the type of work performed by HR Division, P2E2 expectations are modest but nonetheless focused.



Table 0-1. HR Division key customer segments and requirements related to environment.

Customer Segment	Key Requirements	Determined By
LANL Employees	• Help LANL meet key environmental goals	• Appendix F • LANL Goals
LANL Managers	• Help LANL meet key environmental goals	• Appendix F • LANL Goals • Voice of the Customer (VOC)
HR Employees	• Provide a safe and healthy	• Appendix F • Work

Customer Segment	Key Requirements	Determined By
	work environment	Environment Survey • OSHA
Stakeholders	• Help LANL meet key environmental goals	• Appendix F • DOE Orders • OSHA Requirements

## HR - A Systems View

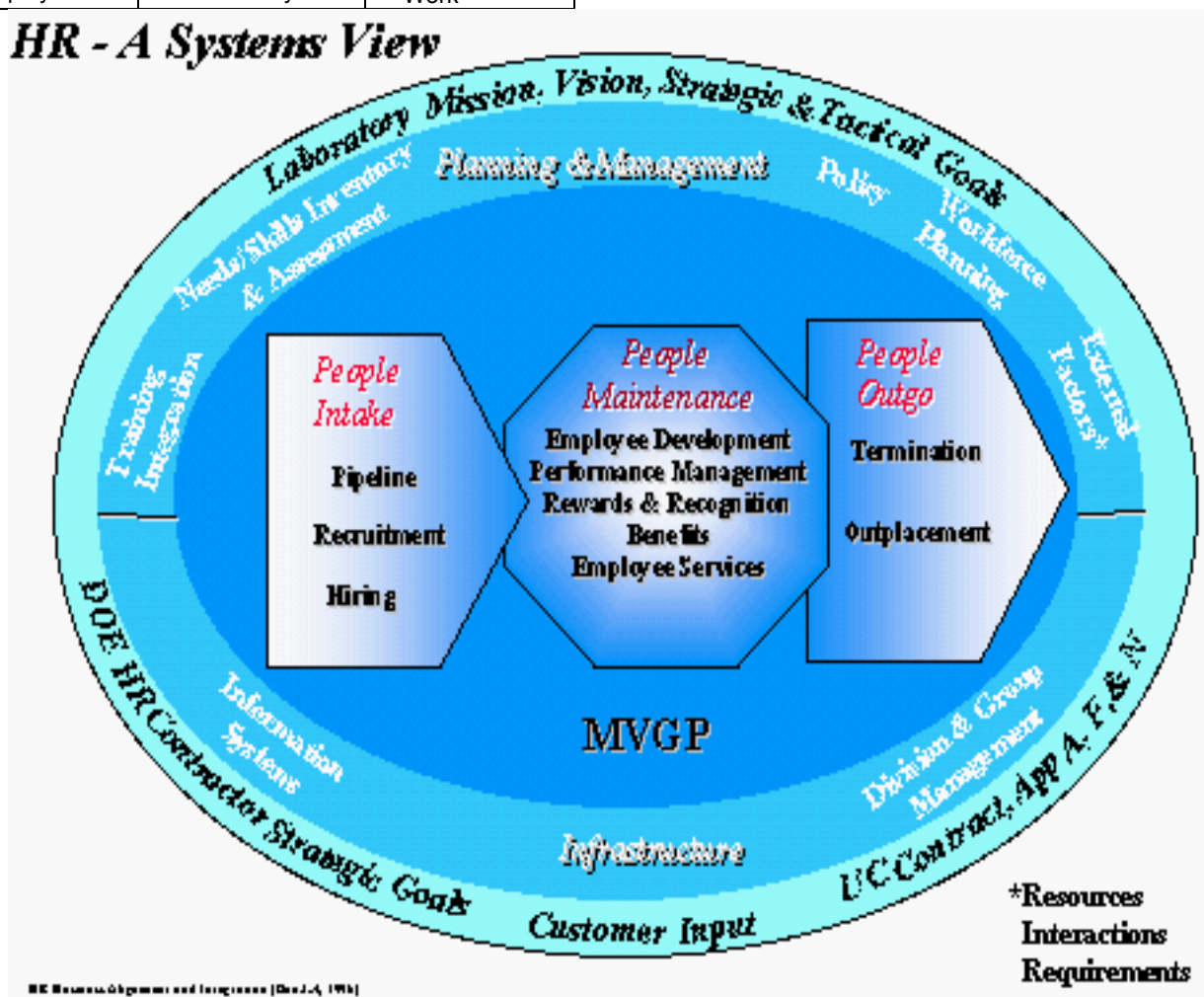


Figure 0-3. HR Division's system view of key processes.

Chief among these expectations are ones related to safe operations—especially ergonomics—and efforts to minimize sanitary waste generation and consumption of resources. In addition to the measures included in Appendix F, HR Division uses a variety of LANL

institutional systems to structure division operations. LANL's Integrated Safety Management (ISM) Program, in its broadest definition, serves as a basis for the institution's environmental management system (see Item 1.1). LANL's Performance Management System

(see Item 5.1) helps leaders establish clear performance expectations for employees and ensure those expectations are aligned with organizational goals and values. LANL mechanisms such as the annual Employee Checkpoint Survey (see Item 3.1) and the Upward Appraisal Program (see Item 5.2) also allow HR Division leaders to evaluate customer/stakeholder satisfaction with division performance.

### **0.3 Supplier and P2E2-Partnering Relationships**

Because of the nature of HR Division's work, most opportunities to interact with vendors on the basis of environmental concerns are limited. In addition, LANL financial policies require that most product/service purchases be coordinated through LANL's Business Operations (BUS) Division. BUS Division also evaluates the overall performance of suppliers.

HR Division does maintain service contracts for maintenance on equipment such as copiers. In these arrangements the vendor is responsible for disposing of supplies used in maintaining the equipment. HR-6 (Training and Development) maintains contracts with training vendors to provide content-specific products and/or services. In most cases, these contracts do not contain an environmental component. Other routine products, such as office supplies, are approved by LANL and conform to any applicable environmental provisions, such as recycled content.

### **0.4 Competitive Situation**

Within the LANL organization, there are no direct competitors who can perform the traditional human resources work functions. Other internal LANL units, however, are competitors for both programmatic funding and funding for specific projects. The LANL budgeting process relies on cost allocation based on a causal/beneficial relationship. However, certain types of costs such as the human resources function benefit many programs. Because charging human resources costs to all programs (i.e., several thousand dollars) is not practical, LANL has chosen indirect cost allocation to identify costs that are caused by or benefit several programs. Other similar functions—such as budgeting, security, and records management—also require indirect allocations and thus seek money from the same budget pool. HR Division is thus required to find ways to both justify operating expenses and improve operating processes to make maximum use of available funding.

Because both DOE and UC use the Appendix F measures to evaluate performance at all three research and development laboratories managed by UC—LANL, Lawrence Livermore National Laboratory

(LLNL), and Lawrence Berkeley National Laboratory (LBNL)—the annual evaluations provide a means of measuring performance levels among the three institutions. Although not all Appendix F measures are applicable to all three laboratories, the side-by-side evaluation each year does provide interesting relative information.

HR Division has for several years actively employed the principles of quality management and CQI (see Item 6.2). Various measures of customer satisfaction and process efficiency indicate that the division has made significant progress in this regard.

### **0.5 Strategic Context**

HR Division has begun focusing on several environmental thrusts:

- paper reduction through double-sided copying, use of recycled paper, and use of electronic documents;
- general recycling through increased emphasis on awareness programs;
- energy efficiency through awareness and improved equipment purchases.

The GZPP cited above was initiated through a strategic partnership with the LANL Environmental Stewardship Office (ESO) to identify ways of reducing routine wastes in an administrative office environment. Interim results from this pilot project were presented at the 1999 DOE Pollution Prevention Conference.

# 1 Leadership

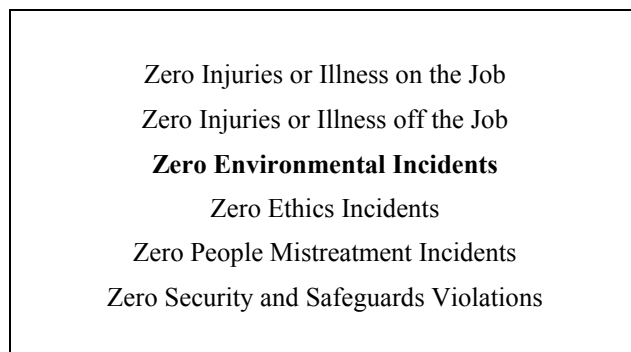
## 1.1 Organizational Leadership

The leadership system that supports environmental excellence in HR Division begins with the director of LANL who, in 1998, issued a vision for LANL that included zero environmental incidents. Figure 1-1 shows the "six zeros" which constitute LANL's highest-level goals. A comprehensive, proactive, ethics-based system cascades down from these leadership goals.

HR Division has been working to establish both processes and behaviors to achieve a substantial reduction in waste—ideally, zero waste. HR management interprets the “Zero Environmental Incidents” goal broadly, to implicitly mandate environmental excellence in addition to the narrow goal of avoiding reportable occurrences. As stated in the Overview, the system begins with a vision and goals that are articulated in a strategic plan for the organization. In addition to articulating a vision, senior HR management has identified these three specific goals:

- providing a coordinated set of customer-focused, value-added products and services;
- maintaining effective and efficient operational systems and processes;
- facilitating organizational and cultural change.

The goal dealing with effective and efficient operations includes a focus on minimizing waste and maximizing efficient use of resources. HR Division managers recognize that waste is the result of inefficiency. Similarly, the goal to facilitate change encompasses a move toward greater emphasis on P2E2 and resource conservation.



**Figure 1-1. LANL's "six zeros" goals.**

The planning process (see Category 2) used by HR Division managers employs a line-of-sight process from high-level organizational goals to individual performance expectations. HR group leaders develop group-level plans to support division thrust areas and

goals. Using LANL's Performance Management System (see Item 5.1), managers then work cooperatively with employees to identify how each individual in the program is expected to contribute to the vision. This methodology has become a cornerstone for the operations within HR Division and is regularly referenced at quarterly all-hands meetings. The leadership system uses these and other meetings to review performance and highlight areas of focus. For example, each quarterly all-hands meeting begins with a discussion of safety.

An integrating framework that HR Division and LANL overall use as an environmental management system is ISM. The broad definition of “safety” encompasses all aspects of environment, safety, and health—including P2E2. The term “integrated” is used to indicate that the safety management system is a normal and natural element of the performance of work: safety isn't a workplace addition, it is how we do business. ISM supports LANL's goal “to accomplish its mission cost-effectively while striving for an injury-free workplace, minimizing waste streams, and avoiding adverse impacts to the environment from its operations.” ISM implementation is a major emphasis at LANL, and senior leaders formally review progress toward full implementation on a quarterly basis.

HR Division's management system is based on frequent and open communication. Group leaders meet weekly with the division management. These sessions focus on expectations and progress toward goals, as well as environmental, health, and safety issues. Sessions always begin with "Safety First." For example, ergonomics is a frequent topic at these meetings, as is waste management. In addition, senior leaders review action on projects, including process improvement efforts, to ensure work is being completed as scheduled and budgeted or to determine necessary adjustments through peer feedback.

Senior leaders also conduct regular management walkarounds. These informal reviews allow leaders to observe working conditions throughout their areas of responsibility, to talk informally with employees, and to note potential areas for improvement. LANL has created nine categories of guidance cards, including environmental protection, that provide suggestions on the types of observations managers should make during walkarounds. In calendar year 2000, HR managers performed nearly 100 documented walkarounds.

HR Division has appointed an ES&H Officer/Green Zia Pilot Project Officer, whose duties are to coordinate division activities in these areas and to bring relevant issues to the weekly meetings of HR managers. This officer also makes presentations at all-hands meetings

and serves as the point of contact for GZPP initiatives undertaken by the division.

The ES&H/GZPP Officer is not only responsible for liaison between HR and ESH Divisions, to promote traditional environmental concerns in the areas of worker safety and health, but is also accountable to division management (see Figure 0-2) for demonstrating continuous improvement in HR's P2E2 performance. Accountability is maintained by means of management's review of the annual Green Zia award application.

Information regarding organizational goals and current progress cascades to individual employees through the management structure. In addition to the quarterly all-hands meetings already mentioned, group leaders hold regular meetings with their staff to discuss programmatic issues. HR Division also maintains a web site with a wide range of available information for employees, customers, and stakeholders. One key part of the web site includes safety resources (see Figure 1-2). Division managers also communicate safety and

environmental issues to employees through a division-wide distribution list, *hr-news*.

Overall LANL P2E2 performance is evaluated according to Appendix F measures, as described in Item 7.1. Heretofore, energy consumption statistics have been available for the Laboratory as a whole but not for individual facilities. However, the FWO-DF Quality Team has recently installed metering to track Otowi-specific electricity consumption. Tracking by tenant will not be practicable in the near term, with the possible exception of ARAMARK.

Energy consumption tracking is one component of the Otowi Energy Retrofit being carried out under FWO-DF Quality Team leadership. Other retrofit components include

- recommissioning of solar panels to supplement the domestic hot water system,
- automated lighting control to reduce after-hours power consumption,
- ongoing training for employees in circuit-load-friendly power cord and appliance deployment.

## HR Safety & Security Resources

**NEW**

ISM Audit, April 16-24

- [Quick Guide Sheet](#) (14K pdf)

### HR Safety & Security Links

- [Hazard Control Plans](#)
- [Otowi Building Evacuation Plan](#)
- [Canyon Complex Building Evacuation Plan](#)
- [Lessons Learned](#)
- [Quarterly Reports](#)
- [Laboratory Implementation Requirements \(LIRs\)](#)



### HR Manager Safety Links

- [Management Walk-Around System](#)

### Other Useful Safety Links

- [Safety Concern System](#)
- [ESH Training](#)
- [ISM Safety](#)
- [Ergonomics Home Page](#)

**Figure 1-2. Safety resources available from HR Division's web page.**

## 1.2 Community Leadership

Although HR Division is a focal point of LANL interaction with the local community related to employment issues, the division has minimal interaction with the public related to environmental issues. LANL has designated organizations, such as the Community Relations and Public Affairs Offices, to routinely handle interactions with the public. Presentations, discussions, and workshops specifically focused on environmental issues are typically coordinated through LANL's ESH Division or the Environmental Science and Waste Technology (E) Division. Other community interactions take place through the integrated outreach programs of LANL.

HR Division makes a conscious effort to "buy green" whenever possible. LANL as a whole follows DOE and Executive Orders in this regard, and LANL performance in affirmative procurement is evaluated against one of the measures in Appendix F. LANL's accounting system allows HR managers to monitor in real time the percentage of purchases that include recycled content. Figure 7-2 in Item 7.1 shows HR Division's performance in supporting purchase of "green" products.

HR Division environmental accomplishments were presented in a poster session at the 1999 DOE Pollution Prevention Conference in Albuquerque, New Mexico. Also, HR calls upon ESO's support to place articles in the LANL daily *Newsbulletin*, a web-based electronic newspaper available both internally and externally, to publicize the division's P2E2 accomplishments. We believe that publicizing successes and lessons learned through all available media among both internal and external stakeholders pays significant dividends because of HR's unique institution-wide leverage at LANL.

## 2 Planning for Continuous Environmental Improvement

### 2.1 Strategic Planning for Environmental Improvement

LANL has developed and uses as a guiding blueprint a strategic plan for the next five years. The current LANL strategic plan (available online to both the public and LANL employees) sets out major

programmatic objectives and strategies. It also identifies

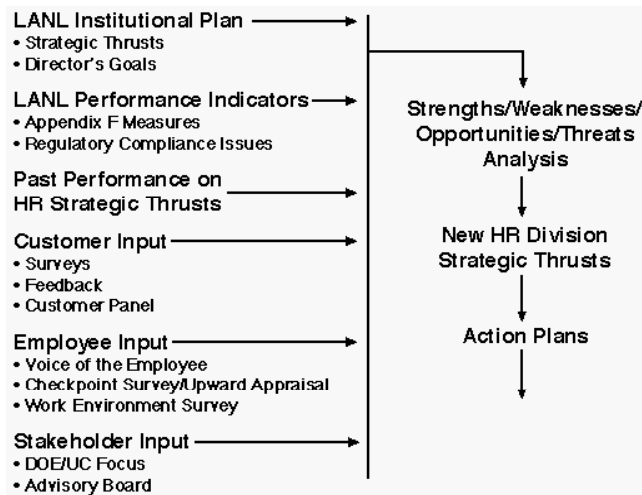
environmental objectives related to most major LANL goals. In addition, a major objective of demonstrating operational excellence in all activities specifically calls out the following strategies:

- Achieve measurable improvements in safety and environmental stewardship through full implementation of ISM [which includes P2] throughout LANL.
- Manage wastes and hazardous legacy materials effectively and accept the challenge of minimizing the generation of hazardous wastes in the future, with a long-term direction toward zero emissions.

Each year LANL also produces an Institutional Plan, a five-year perspective on LANL operations. This document (available online to the public and to employees) identifies strategic requirements for LANL organizational units, including HR Division; summarizes strategic, tactical, and programmatic plans; and helps ensure the integration of LANL activities with DOE priorities.

Based on LANL strategic directions and DOE requirements, HR Division then develops its own strategic plan. Figure 2-1 gives an overview of the HR strategic planning process, which includes input from each of the following:

- Past performance, as documented through such activities as management walkarounds (see Item 1.1), as well as results from process improvement efforts (see Item 6.2).
- Item 4.1 describes the general and specific measures from Appendix F that influence HR Division focus. Category 7 presents a wide range of results that are considered in division planning.
- Item 3.1 discusses HR Division's Voice of the Customer (VOC) Program.
- HR Division also includes employee feedback gathered through the Work Environment Survey, LANL's annual Employee Checkpoint Survey (see Item 3.1), and the LANL Upward Appraisal Program (see Item 5.2).
- Item 3.3 outlines the HR Division advisory committee that provides additional data on best practices and industry standards.



**Figure 2-1. HR Division's strategic planning process.**

HR Division planners have traditionally included occupational ES&H issues and associated regulatory compliance. For example, the division routinely plans for ongoing review of employee ergonomic safety. But LANL has historically not viewed HR Division as a major component in environmental issues, and there has been little impetus to include P2 or resource minimization in HR Division's strategic planning process. Similarly, other HR Division customers and stakeholders have tended to place little emphasis on the division's environmental performance. Participation in the New Mexico Green Zia Environmental Excellence Program, with accompanying development of appropriate measures and performance indicators, is, however, allowing the division to begin incorporating such focus into long-range plans.

Prioritization of environmental initiatives at the strategic level must necessarily proceed in a nontraditional fashion at HR. As an organization that primarily works in an office setting, worst-loss analysis in the P2 arena is not likely to return significant dividends when compared to our key business factors. Traditional worst-loss analysis in the E2 arena might very well return significant dividends, but such is not practicable in the near term for reasons discussed in Item 1.1. Therefore, during the strategic planning process, management and the HR ES&H/GZPP Officer consider a priority initiative to be one by which the division can exert maximum leverage upon our institutional culture.

Figure 0-2 shows how strategic planning is incorporated into the CQI-based HR environmental management system.

## 2.2 Action Planning

Each organization in HR Division is responsible for identifying how it will contribute to achieving the overall strategic vision of the division. Every year each HR group validates its key functions and initiatives and then establishes short-term goals, measures, and success indicators. Each group's action plans align with division objectives and are complementary to the plans of other HR groups. The same information used to develop overall HR Division strategic plans (see Figure 2-1) is available to each group. In addition, each group may include information or feedback specific to its function in creating action plans. Figure 2-2 gives an overview of the process for developing action plans.

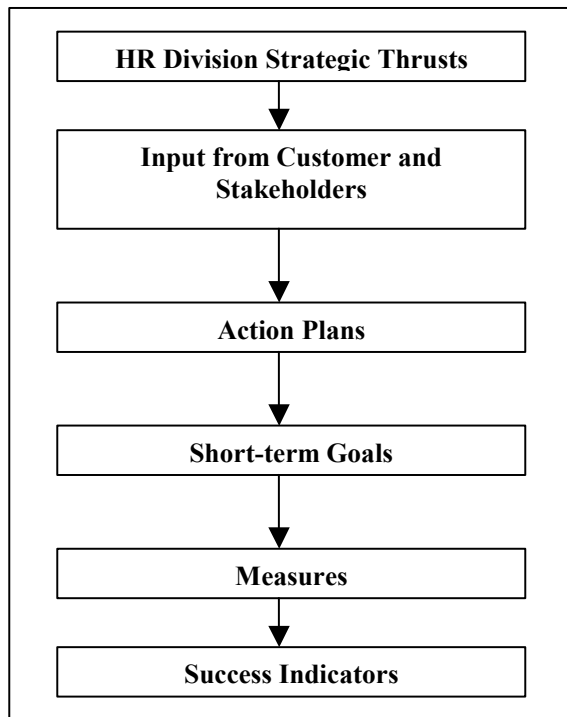
The HR ES&H/GZPP Officer (see Figure 0-2) is responsible for assessing action plans with both a view to regulatory compliance issues and the P2E2 ethic. The ES&H Officer's recommendations are incorporated into the planning process at the point corresponding to "Action Plans" in Figure 2-2. Action plans addressing specific P2E2 initiatives authorized during strategic planning are in turn formulated during consultation between the ES&H Officer and the FWO-DF Quality Team.

Because focus on environmental performance is relatively new to HR Division, none of the existing action plans include specific reference to P2 or waste minimization. But because managers and employees recognize that inefficiency leads to waste, there is an ongoing effort to improve operations. Item 6.2 describes the method by which key division processes are analyzed and improved. These improvement efforts include action plans, which are regularly reported to management and tracked for successful completion.

Figure 0-2 shows the role of action planning in the HR environmental management system.

HR Division involvement in the Green Zia Environmental Excellence Program and related pilot projects has led to an increased awareness of environmental concerns across the organization. The division ES&H Officer has begun to collect baseline data related to resource usage and waste generation that can provide a starting point for future efforts.

Additionally, HR Division annually develops an implementation strategy for ISM, focusing on how to involve all employees in making this program a routine part of all operations. In combination with the leadership systems previously described, these efforts then set the stage for development and execution of action plans.



**Figure 2-2. HR Division's action planning process.**

## 2.3 Integration and Implementation

Within HR Division, strategic and action plans are integrated, documented, and tracked by the management team. The division office compiles and places the documented goals and strategies on the HR Division web page, where they are available to employees, customers, and stakeholders. Senior leaders formally review the plans quarterly to ensure the division is making appropriate progress and report this progress through group meetings, all-hands meetings, and electronic publications. Quarterly Appendix F reviews document HR Division performance, as does the final year-end assessment. HR Division's contribution to overall LANL Appendix F environmental goals is also reviewed and documented quarterly and in a written annual assessment.

The planning process allows managers to closely tie both strategic and tactical activities to budget submissions and to plan for most effective movement of HR staff to meet requirements. The quarterly reviews allow managers to track resource allocations and to make any necessary adjustments to either funding or human resource allocations.

HR Division has partnered with quality improvement teams on major processes, particularly in environmental management (see Item 0.1). The teams, which are tasked with identifying and implementing efficiency

improvements, use a formal CQI process and associated improvement methodology and tools (see Item 6.2). Senior leaders charter the teams and track their progress on a regular basis. Results are incorporated into performance measures as part of gradient expectations.

Finally, development of clear strategic and action plans allows for full integration of performance requirements for each individual HR employee. As discussed in Item 5.1, objectives for each employee are designed to ensure that the organizational objectives are met and that the employee has a clear view of how his or her work requirements contribute to the success of the entire organization.

## 3 Customer, Supplier, and Others Involvement

### 3.1 Customer Involvement

Just as frequent and open communication marks HR Division's internal management practices, so does it characterize interactions with customers and stakeholders. The division is highly conscious of the need to fully involve all affected parties in seeking to improve the efficiency of work and demonstrating a sustainability ethic in daily operations.

The performance measures found in Appendix F of UC's operating contract provide clear expectations, increase accountability, and improve customer relations by addressing performance issues that concern DOE. Hence, Appendix F serves as a major vehicle for both determining customer requirements and performance levels for all of HR Division's customer segments.

Appendix F contains approximately one hundred specific performance measures and associated goals. One entire section of Appendix F relates specifically to human resource issues. While these measures demand a major focus of HR Division activities, they do not relate directly to the division's environmental performance. HR Division performance is, however, included in several of the Appendix F measures directly related to environmental excellence that fall within the functional area of environment, safety, and health. In addition to providing some specific data related to HR performance, these environmental measures also show the division's contribution to overall LANL environmental achievement.

The negotiation steps for Appendix F measures, the process to set priorities, the improvement steps, and the resulting evaluations (see Fig. 3-1) all help focus HR



Division resources on key business processes and improve operational quality. Appendix F requires an annual self-assessment and evaluation by both UC and DOE, but HR Division senior leaders also meet quarterly with UC and DOE representatives to discuss current progress against goals and to identify any issues. Senior leaders also interact more often with DOE and UC customers on an as-needed basis. The regular and frequent interaction helps prevent surprises, mitigate problems, and create a cooperative rather than an adversarial atmosphere.

In addition to identifying overall HR Division performance expectations, Appendix F includes specific requirements related to collection and analysis of customer needs. For example, the most recent modification of Appendix F contains performance measure I-6 1.3.a, Evaluation of HR Systems and Processes and Description of Associated Improvement Results, which states

The Laboratory will use a variety of approaches for identifying HR system and processes for improvement. The approaches may include customer feedback, cost–benefit analysis, workflow analysis, process mapping and/or benchmarking, etc. The purpose is to improve existing systems and processes, or implement new initiatives. Results may include accomplishments made in multi-year projects.

Appendix F thus provides both the requirement and a mechanism to do process analysis and improvement related to customer input. The Laboratory-wide Appendix F ES&H performance measures cited in Item 0.1 obligate HR—indeed, obligate all LANL organizations—to proactively advance the P2E2 ethic

in interactions with customers. Automation of some manual systems, including online Performance Appraisals, online resume/applications, and online Employee Self-service will eliminate considerable paper from the system. Conversion of several record systems to electronic imaging systems will further eliminate the requirement for paper. This includes the Personnel Records Imaging System and the soon-to-be implemented Benefits Records Imaging System.

HR Division interacts with its LANL customer segments in a variety of ways. Annually HR Division senior leaders conduct a VOC Program. VOC is a one-to-one interviewing technique used to obtain key requirements from customers. The objectives of VOC are to

- build customer relationships,
- identify HR Division strengths from the customer's point of view,
- identify customer needs and concerns,
- assess the level of customer satisfaction,
- identify key areas for improving customer satisfaction.

In addition to the annual VOC Program carried out by division managers, each group leader also interacts with key LANL customers. This is especially true for distributed services, where managers meet with customers on a regular basis to assure that HR Division is meeting performance requirements.

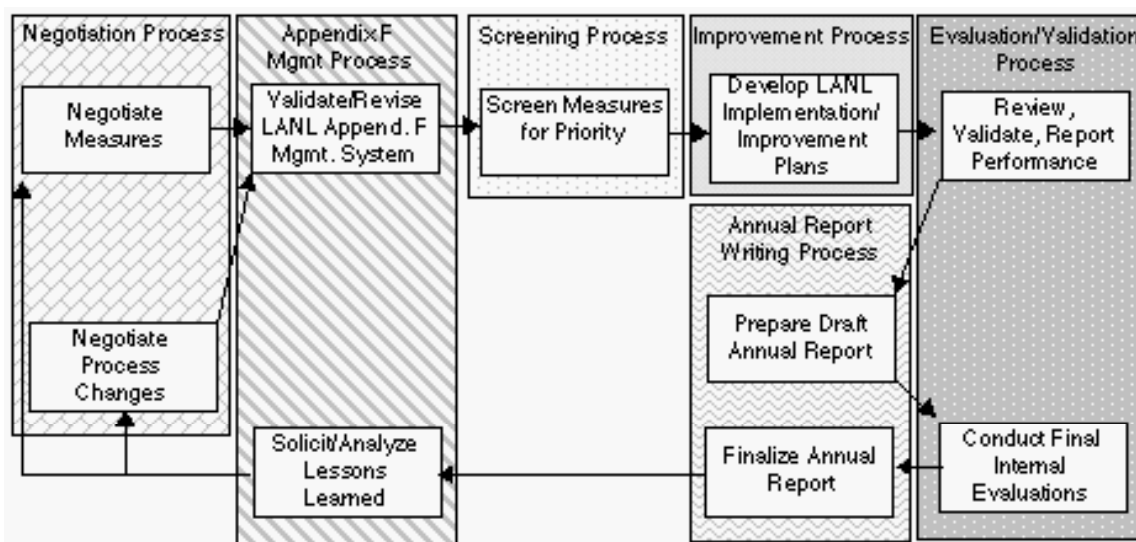


Figure 3-1. LANL Appendix F process (18-month continuous cycle).

To gather feedback from HR Division employees, division management relies on a formal institutional feedback mechanism, the Work Environment Survey. This year, a LANL committee gathered more than 500 employee concerns from town-hall meetings, the Employee Advisory Council, diversity working groups, the Diversity Council, and other special interest groups. The committee then categorized the major issues and developed survey questions from common themes relating to these issues.

HR Division also relies on two LANL programs, the annual Employee Checkpoint Survey and the Upward Appraisal Program. The Checkpoint Survey monitors employee perspectives and contains standard types of questions in general categories including safety, productivity, and customer focus. The structure of the survey allows HR senior leaders to perform comparisons with other operational divisions within LANL and also with other companies. For the past several years HR Division has administered and participated in LANL's annual Upward Appraisal Program (see Item 5.2), which allows employees to provide direct feedback to managers regarding the supervisors' behavior and ability in areas such as environment, safety and health; communication; and accountability. HR Division managers review the information from these two instruments and use it to help establish goals and corrective actions. Finally, management walkarounds provide an opportunity for managers and employees to interact informally and to jointly review safety and environmental issues in the workplace.

To monitor public perception, HR Division relies on a quarterly survey of public opinion, which LANL has conducted since 1990. The resulting reports profile New Mexico residents' views and identify results from specific geographic areas around the state. In addition to asking about general perceptions of LANL, the survey specifically asks respondents their opinion of LANL's environmental responsibility. Results from the survey are recorded, analyzed, reviewed, and used in planning activities.

HR Division uses its World Wide Web site to communicate with customers, stakeholders, and suppliers, keeping all parties well informed of current and projected progress. The site contains extensive information, including program details, answers to frequently asked questions, and numerous forms that provide just-in-time data while minimizing paper consumption. All of the pages on the web site have comment lines, allowing users to send requests or comments to the immediate attention of the appropriate HR Division staff. The division is also in the process of implementing an online survey tool that will collect,

aggregate, and analyze input from HR Division customers. HR Division's transition to electronic communications also encourages customers to conserve resources, as does the division's efforts to streamline processes (see Item 6.2). For example, a current initiative to improve the LANL hiring processes is expected to save over 150,000 sheets of paper annually for HR Division and customers combined.

HR and its BUS partner rely on each other to vet the most up-to-date information from suppliers on P2E2-friendly procurement opportunities.

### **3.2 Supplier Involvement**

Because of the nature of HR Division's work, most opportunities to interact with vendors on the basis of environmental concerns are limited. In addition, LANL financial policies require that most product/service purchases be coordinated through LANL's BUS Division. BUS Division also evaluates the overall performance of suppliers.

Within its limited sphere of interaction with suppliers, HR Division does, however, employ several environmental considerations. For example, the division now ensures that all new computers are equipped with Energy Star, an energy saver function that turns off the monitor's screen when the computer is not in use. The division also is making a determined effort to ensure that purchased office products, including paper, contain recycled content. To minimize the use of paper, HR Information Systems conducted an audit to ensure that printers and copiers were set to automatically print double-sided, and new equipment will be required to have that capability. The use of electronic messaging and a comprehensive web site also promote the minimization of paper usage. For example, Training and Development publishes course listings and class schedules electronically. The division also promotes saving of wastes and expense associated with unnecessary travel by championing teleconferencing and distance learning.

### **3.3 Others Involvement**

HR Division's primary method of communicating and involving other interested parties is through participation in the New Mexico Green Zia Environmental Excellence Program. The Green Zia Program is a state-wide initiative designed to encourage businesses to focus on P2 as an economic business advantage. Established by the 1998 New Mexico legislature, the Green Zia Program is administered by the New Mexico Environmental Alliance, a partnership of state, local, and federal agencies; academia; business and industry; and environmental advocacy groups. The basic premise of the program is that waste is the result

of inefficiency and by reducing waste a company can increase its profits. The environmental benefit is clear: waste that is never created does not pollute. Participation in the program gives HR Division an annual third-party, independent evaluation of successes and opportunities for improvement in environmental performance.

Since June of 1999 HR Division has been a major participant in a LANL GZPP aimed at reducing waste generation and resource consumption in a typical administrative office environment. Working with BUS Division, ESO, and facility managers from FWO Division, HR Division has begun looking at operations in the Otowi Building, where the majority of HR employees reside. The project affects over 600 building occupants and involves a wide variety of stakeholders who are identifying wastes generated and resources consumed, determining existing baseline performance information, setting priorities for potential areas for improvement, and then developing and implementing improvement action plans. The project is producing specific, measurable results for actions designed to reduce waste, to lower consumption of resources, and to increase operational efficiency. In addition, the project is generating other less tangible but equally positive benefits. For example, the project allows all employees to become involved in P2 and contribute to activities with measurable results. The project is also broadening the support base for the creation of LANL's P2 culture. In addition to producing short-term gains, the project is also setting the stage for longer-term improvements. Within the next few years the three-story Otowi building's approximately 75,000 square feet of carpeting and tons of metal flooring supports may be replaced. Participants in the GZPP are encouraging LANL to install recycled carpeting and recycle the old carpeting and metal supports, which will have a significant positive impact on waste minimization.

To gather customer feedback, the FWO-DF Quality Team (see Items 0.1 and 1.1) conducts annual landlord-tenant agreement consultation, as required under the LANL ISM system. Also required by ISM is a three-tiered series of audits designed to gather input from customers. Typically, FWO performs a preliminary self-assessment audit, then requests the LANL Audits and Assessments Division to perform an internal audit. These audits are performed to prepare for an external audit.

The annual Green Zia application process has provided to HR an invaluable partnership with NMED, which complements the LANL Public Affairs Office efforts to systematically involve stakeholders across the northern

New Mexico community in recognizing successes and scrutinizing lessons learned.

## **4 Information and Analysis**

### **4.1 Information Collection Management**

The Appendix F Process (see Item 3.1) is a key performance indicator of HR Division's contractual requirements and also a measure of customer satisfaction. Managers monitor progress related to performance goals and use that information to develop and/or modify operational plans and to identify areas for improvement. Results presented in Category 7 show that overall scores in the Appendix F functional area of human resources have improved over the past three years, indicating increasing DOE approval of performance in this area. In addition, HR Division has received steadily increasing scores in several specific areas of Appendix F related to process analysis and improvement (see Item 7.1) and to customer needs analysis (see Item 7.2).

Many of the Appendix F measures evaluate total LANL performance in environmental arenas. Because the measures include all aspects of LANL operations, HR Division's performance contributes to the ultimate evaluation score. HR Division has identified the following LANL-wide environmental performance measures as being directly applicable to the division and closely monitors performance levels:

- management walkarounds (see Item 1.1);
- injury/illness prevention;
- E2 and overall utilities conservation (this item includes three separate and distinct measures);
- supplier performance;
- source reduction and P2 (this measure includes sanitary waste reduction, recycling, and affirmative procurement).

LANL senior leaders also monitor progress toward full implementation of ISM (see Item 1.1; also see item 3.3 for information on ISM-required audits). The ISM Project Office has established a detailed implementation schedule and monitors all portions of LANL, including HR Division, to ensure that milestones are achieved and that performance goals are met. A DOE audit of ISM in the fall of 2000 indicated that implementation is on track and that LANL efforts in this area are fully satisfactory.

In addition to monitoring its relative contribution to overall LANL institutional performance as measured by Appendix F, HR Division also tracks information gathered through participation in LANL institutional programs. For example, senior leaders review results from LANL's public opinion survey and also analyze division-specific information from the annual Employee Checkpoint Survey, the Work Environment Survey, and the Upward Appraisal. Internal data—such as that from the VOC Program, the Work Environment Survey, and from operational performance and improvements—also plays a role in management's review of HR Division.

HR Division leaders have also begun to gather baseline data on other aspects of the division's environmental performance:

- In addition to its contribution to overall LANL performance in injury/illness prevention, HR Division specifically measures and tracks its own performance in this area.
- Division management recognizes that employee injuries and illness have a direct impact on productivity. Monitoring the effectiveness of management walkarounds also helps assure that managers are aware of and can correct potentially dangerous or unhealthy situations.
- This year, for the second time, HR Division will receive impartial evaluation and feedback on its environmental performance through participation in the New Mexico Green Zia Environmental Excellence Program. Division senior leaders will begin tracking this measure and will use identified opportunities for improvement as initiation points for remedial actions.
- Many aspects of daily operations such as collection and filing of resumes, job applications, and personnel files are now performed electronically. HR Division has begun to measure and track the number of paper copies avoided by this change. A related measure is the amount of paper purchased by the division.
- Process changes save not only physical resources but also result in time and cost savings. HR Division monitors process performance and tracks these savings in efficiency and effectiveness.
- Heretofore, sanitary waste generation was not tracked at LANL by organization. However, FWO is in the process of deploying a fleet of PackMaster collection trucks equipped with scales, enabling recharge by weight to be levied on given Facility Management Units. The baseline for the main LANL technical area, where the Otowi Building is located, will facilitate future P2 decision-making (see Figure 7-4).
- Although HR Division is included in overall LANL performance measures related to energy conservation, until recently there has been no way to directly measure the division's actual contribution. Metering changes implemented by facility managers from LANL's FWO Division may now allow a more direct measurement of HR Division's energy consumption along with more accurate evaluation of improvement efforts.

The categories of baseline data to be collected are determined during action planning (see Item 2.2) in response to the strategic plans issued by division management (see Item 2.1). It is the HR ES&H/GZPP Officer who is primarily responsible for making the determination, but the FWO-DF Quality Team is also a key partner in the task.

#### 4.2 Analysis and Decision-making

HR Division managers systematically analyze data to develop the information necessary for wise decision-making. The strategic planning process described in Item 2.1 forms the basis for the annual roll-up of a comprehensive set of data. The division management team formally reviews the strategic plan quarterly. Senior leaders also regularly evaluate division thrust areas and progress toward goals. Semiannually the division formally evaluates progress toward Appendix F goals. Additionally, once every six months each manager is reviewed to assess progress toward meeting individual performance objectives, which are tied to organizational goals. On a more informal basis, operational data is presented and analyzed at the weekly management meetings that include all leaders within the division. HR Division managers review all the data identified in Item 4.1, including audit data, on at least an annual basis, with the majority of information being evaluated much more frequently.

In addition to using operational data to identify opportunities for process and performance improvement, HR Division uses strategic benchmarking to understand industry best practices. For example, HR Division currently has an

Employment Process Improvement (EPI) Team that has been tasked with identifying, understanding, and adapting outstanding practices from organizations similar to LANL. Item 6.2 discusses the formal improved financial process this team is using, and Item 7.3 presents some improvement results. A major task of the cross-functional EPI Team was to design and conduct a benchmarking survey of ten leading research and development companies. The team then conducted site visits of selected companies to better understand best-in-class employment practices. The team also became a sponsor and participant in a consortium benchmarking study on recruiting and retaining information-technology employees. The study was conducted under the leadership of the American Productivity and Quality Center, of which LANL is an institutional member. Although full implementation of proposed changes will be a multiyear effort, HR Division has already begun implementing some of the improvements suggested by the EPI Team and has identified significant performance improvement goals, but no significant measure can be made until Personica, an automated application and resume processing system, is fully implemented.

The Appendix F measures also provide HR Division with an opportunity to compare performance levels with both LLNL and LBNL, the two other research and development laboratories managed by UC for DOE. Not all Appendix F measures are applicable to all three laboratories, and some adjustments are made for individual institutions. While the comparison process is not always precise and does not constitute formal benchmarking, the side-by-side evaluation each year does provide interesting relative information and leads to identification of areas for improvement.

The action planning process described in Item 2.2 forms the basis for a periodic assessment of progress on specific initiatives relating to P2E2 goals and partnering with employees, vendors, and customers. As stated in Item 4.1, data collection for analysis and decision-making is the responsibility of the HR ES&H/GZPP Officer. The sources of data are varied, with principal input coming from the

- HR Information Technology Office,
- ESO Database Administrator,
- FWO-DF Facility Manager.

The ES&H/GZPP Officer conveys the data to HR Division managers either in ad hoc reports or, most especially, in the context of the annual division-level review of HR's Green Zia application. Incorporated into the Officer's draft are LLNL and LBNL benchmarks in key P2E2 performance measures called

out in Appendix F. Managers use the data in the quarterly reviews of HR strategic plans (cited above) and, consistent with the environmental management system, in formulating strategic plans (see Item 2.1).

## 5 Employee Involvement

### 5.1 Employee Education and Skill Development

HR managers work with each employee to cooperatively prepare individual development programs—both short-term and long-term—on an annual basis as part of LANL's Performance Management System. This system, which Figure 5-1 shows, requires HR groups to establish objectives which support the organizational echelons above them. Objectives for each employee are then designed to ensure that the organizational objectives are met and that the employee has a clear view of how his or her work requirements contribute to the success of the entire organization. The Performance Management System ensures clear two-way communication during the goal-setting phase of the process and provides a focus for ongoing discussion about work objectives and processes. Specific goals include

- aligning individual expected results with institutional goals,
- identifying and assessing individual performance results/accomplishments,
- evaluating performance of institutionally defined behaviors,
- describing how individuals helped to meet organizational objectives,
- linking performance to rewards or consequences,
- designing development plans to support improving performance in current jobs and/or increasing impact on the organization,
- enhancing employee/manager ownership of individual and organizational performance,
- improving two-way communication between supervisors and employees.

Once developmental goals have been established, employees may participate in appropriate training offered by LANL or other organizations. LANL's ESH Division offers over forty courses related to environmental issues, from general safety training and first aid to courses on such specific topics and



Employees may also provide comments and observations at group meetings and the quarterly all-hands meetings. The annual Employee Checkpoint Survey and the Upward Appraisal Program provide ways for employees to give anonymous input. HR Division's ES&H officer maintains an electronic mail address, [hrss@lanl.gov](mailto:hrss@lanl.gov), to which employees can address issues and questions.

LANL's ESO has also established an electronic mechanism for soliciting employee input on P2E2 in product, service, and process design. HR Division employees, as well as any LANL employee, can send comments, observations, or questions to [wastenot@lanl.gov](mailto:wastenot@lanl.gov). The message will be routed to the environmental expert best able to respond, the sender will be notified, typically by e-mail, of any proposed action, and ESO will track the issue to resolution.

In addition to providing input, HR Division employees have the opportunity to work toward improved organizational performance. When HR Division senior leaders charter a team to evaluate and improve operational processes, employees have the opportunity to be appointed by management or to self-select to work on the project.

Senior leaders ensure that the division's human resources are properly aligned to carry out proposed action plans. The alignment process begins with the annual strategic planning update. Leaders develop long-term priorities and projections and ensure that adequate resources are available. As projects evolve, leaders use quarterly or monthly reviews of action plan progress to ensure that resources continue to be adequately aligned.

HR Division leaders communicate environmental information in a variety of ways. In addition to the normal flow-down of reports through regular all-hands and group meetings, managers devote specific attention to discussing Appendix F reviews, Employee Checkpoint Survey results, and Upward Appraisal feedback. The Upward Appraisal Program, in particular, sets specific expectations for managers to review feedback with subordinates and to develop action plans for improvement. Figure 5-3 shows the overall Upward Appraisal process; Figure 5-4 describes the process for using feedback.

HR GZPP is a participant in resource conservation strategy sessions conducted by FWO-Utilities and infrastructure, to promote E2-friendly workplace practices for reducing power consumption by computers and lights.

Efforts to promote carpooling are another example of how the HR GZPP encourages employees to minimize

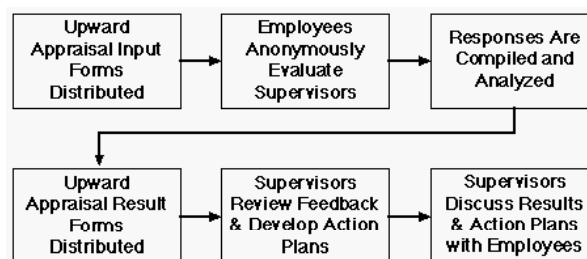


Figure 5-3. LANL's Upward Appraisal process.

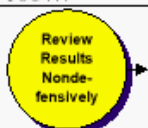



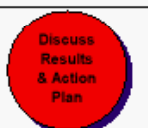
BASIC PRINCIPLES OF USING THE FIVE STEP MODEL TO ACCEPT AND USE FEEDBACK	
FEEDBACK IS MOST HELPFUL WHEN YOU ...	WHY?
	If you are preparing your defense as you read, you can miss valuable points; be open to information and suspend mental responses or justifications.
	If patterns emerge they can help you prioritize areas for development. The stronger the trend, the more likely it is that the information is important.
	This "stop and think" step is extremely important so that you analyze trends or comments and put them into perspective prior to action planning and making your response known through discussion with others.
	Based on your reading and reflection, you can determine the areas in which you see the most need for development as a manager—and determine specifically how you will go about meeting those needs. Research shows that specific, written action plans or goals have a very high implementation rate compared to goals that are not concrete.
	If you thank your employees for their feedback and let them know in a meeting how you plan to respond, it will keep the door open for better communication all year. This is a good opportunity to ask for input into your action plans, which could strengthen them.  Also, prepare to discuss results with your immediate manager, who is expected to use the results as part of your individual development plan and/or appraisal.

Figure 5-4. The five-step model for accepting and using Upward Appraisal feedback.

the environmental impact of their work duties on the local community. Near the Otowi Building, LANL has established reserved parking for high-occupancy vehicles. And the LANL daily *Newsbulletin* maintains an electronic "Commuter's Corner" where prospective carpoolers can advertise or look for ride-sharing opportunities. HR does not currently gather data on how many of our staff carpool, but the ES&H/GZPP Officer's monitoring of slots for high-occupancy vehicles in the Otowi parking lot shows that on a typical workday, all of the slots are full during regular business hours.

See Item 0.1 for information on the role of employee feedback on the HR environmental management system and the FWO-DF role in mediating employee feedback.

### **5.3 Employee Satisfaction, Value, and Well-being**

LANL's major formal method for determining employee attitudes and the climate in the workplace is the annual Employee Checkpoint Survey, which has been used for the past several years. The survey contains standard types of questions in general categories including safety, productivity, and customer focus. A second major method is LANL's annual Upward Appraisal Program, which allows employees to provide direct feedback to managers regarding the supervisors' behavior and ability in areas such as environment, safety, and health; communication; and accountability. HR Division managers review the information from these instruments and use it to help establish goals and corrective actions.

The division is satisfied that the Employee Checkpoint Survey and the annual Upward Appraisal provide adequate feedback to strategic planners on the safety component of environmental management (see Figures 7-8 and 7-9). HR expects to build on this strength by means of a CQI process, in connection with the 2001 Green Zia Award application—in which the ES&H/GZPP Officer makes recommendations to managers (see Item 4.2). The officer has available several avenues of communication with managers to make recommendations on P2E2 matters, including the weekly HR Forum.

There are also incentives to encourage staff to work smarter and utilize innovative approaches to accomplish their work. The Pollution Prevention Awards Program, sponsored by LANL's ESO, is open to all LANL employees and subcontractors. It is designed to encourage individuals and teams to develop plans, programs, or ideas for minimizing waste; conserving water, electricity or natural gas; reducing air or water pollution; or procuring products with recycled content. Recipients of the awards receive recognition and a cash grant from specially allocated congressional funds.

Employees at all levels are encouraged to apply for Pollution Prevention Awards (past winners have ranged from senior scientists to junior staff) through news articles, photo ops, and cash prizes.

The Los Alamos Awards Program, administered by LANL institutionally but tailored for application at the division or program level, provides a link between the organization's mission and those employees or teams that achieve significant accomplishments toward that

mission. HR Division managers use the program to recognize exceptional contributions and noteworthy achievements by awarding their employees, either individually or as teams, cash awards ranging from \$250 to \$2000.

As part of the larger LANL community, HR Division relies primarily on institutional programs to enhance employee support. LANL offers a comprehensive set of support initiatives along with feedback systems. Division employees are encouraged to use all LANL services that are appropriate and relevant to their individual needs.

To provide emotional support, LANL provides an Employee Assistance Program (EAP) whose main goal is to assist employees with personal problems that are affecting their job performance. The EAP also offers a wide variety of presentations and workshops on such topics as stress management, gender issues, conflict resolution, and smoking cessation. The EAP also makes available a collection of books, videos, and audio tapes on workplace issues. The program is available free of charge. Usually employees refer themselves; however, a supervisor can refer an employee if job performance has been identified as a problem.

For employees' physical well-being, LANL maintains a Wellness Center. The center offers equipment and specific areas for weight training and aerobic exercise in individual and group formats. Use of the center for individual exercise programs is offered free of charge. The center also provides, usually for a small fee, a wide variety of exercise and health programs including stress management, healthy eating, aerobics, yoga, and cardiovascular fitness. The center offers individual fitness evaluations for a nominal fee. The center monitors daily use numbers and has completed user satisfaction surveys along with participant evaluations.

Division employees may choose between two basic work schedules, a traditional 5-day/40-hour week or a new 9-day/80-hour schedule which allows employees every other Friday off. In addition, HR Division allows employees, with prior agreement of their managers, to use some flexibility in their regular work schedules to meet personal needs.

LANL provides employees and managers formal guidance on administrative reviews and grievances. In addition to this formal support, the institution provides responses to informal queries as well as guidance to employees or management on relations in the workplace. Specific support is available on such subjects as counseling, sexual harassment, violence in the workplace, and interpersonal skills.



An Ombuds Office, available to any individual in the workforce, provides services including addressing work-related issues, assisting employees in obtaining services, or expediting actions. The Ombuds Office also provides a Mediation Center—available to all members of the workforce—which provides a structured approach and environment to resolving issues between employees or between management and employees.

## **6 Process Management**

### **6.1 Process Characterization and Control**

In addition to internal procedures that continuously improve operational performance, HR Division has customer requirements that mandate process evaluation and improvement. Appendix F provides both a requirement and a mechanism to monitor, manage, and improve processes, including

- customer feedback,
- cost-benefit analysis,
- workflow analysis,
- process mapping,
- benchmarking.

Formal operational assessments occur during quarterly, semiannual, or annual reviews (see Item 4.2), but leaders may also consider operation performance at any of the weekly management meetings.

HR Division leaders use the wide variety of data described in Item 4.1—including data from customers, employees, and operational reviews—to assess the performance of key processes (also see Items 0.1 and 3.3). Customers, including both LANL employees and LANL managers, are intimately involved in process evaluations through their input to the VOC process. Employees provide operational evaluations through their input to employee surveys, such as the Checkpoint Survey and the Work Environment Survey. Both DOE and UC stakeholders are active participants in establishing performance expectations and in evaluating operational achievement through the Appendix F process (see Item 3.1).

The Appendix F process is one method by which division leaders may identify best practices and compare HR Division performance with the performance of competitors. The division also uses strategic benchmarking (see Item 4.2) to identify ways

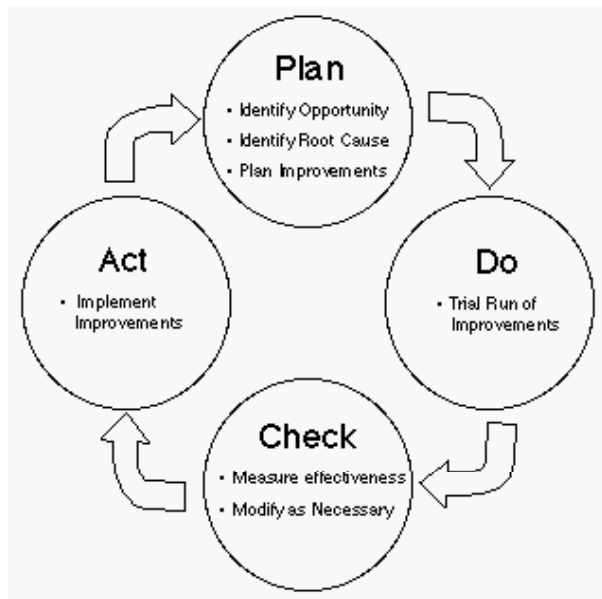
to avoid failure or loss and to maintain or improve efficiency.

Partnering among division management, the HR ES&H/GZPP Officer, and the FWO-DF Quality Team (see Items 0.1 and 3.3) focuses on ways to reduce waste generation and resource consumption in division processes. In cooperation with other project participants, HR division employees are identifying wastes generated and resources consumed, determining existing baseline performance information, setting priorities for potential areas for improvement, and then developing and implementing improvement action plans. The project is producing specific, measurable results for actions designed to reduce waste, to lower consumption of resources, and to increase operational efficiency. In addition, the project gives all employees another avenue for providing input regarding the environmental performance of division processes.

### **6.2 Process Improvement**

As Item 6.1 explains, HR Division has a contractual mandate to continuously monitor and analyze processes for potential improvements. Use of Appendix F as a framework for process analysis and comparative evaluations is a mature, eight-year-old system that has yielded significant improvement in most areas reviewed.

HR Division uses a systematic CQI process to upgrade its processes on an ongoing basis. See Item 0.1 for information on the subset of CQI processes that pertains to environmental management. For product and service production/delivery processes, HR Division relies on a generalized evaluation and improvement methodology based on Deming's Plan-Do-Check-Act (PDCA) cycle, which is similar to the Green Zia process improvement system (see Figure 6-1). Combined with the guiding principles, PDCA forms a framework within which managers and improvement teams employ a variety of tools and techniques to address opportunities for improvement. The goal is to help managers most intimately involved with day-to-day operations have the flexibility to determine how best to maintain optimum process performance and meet customer expectations. This process ensures that, based on regular and frequent customer interactions, managers will select and monitor those key in-process measurements most appropriate for each individual project and process. While this process has so far been used minimally to address environmental improvement issues, it is the formal way HR Division handles overall process improvement.

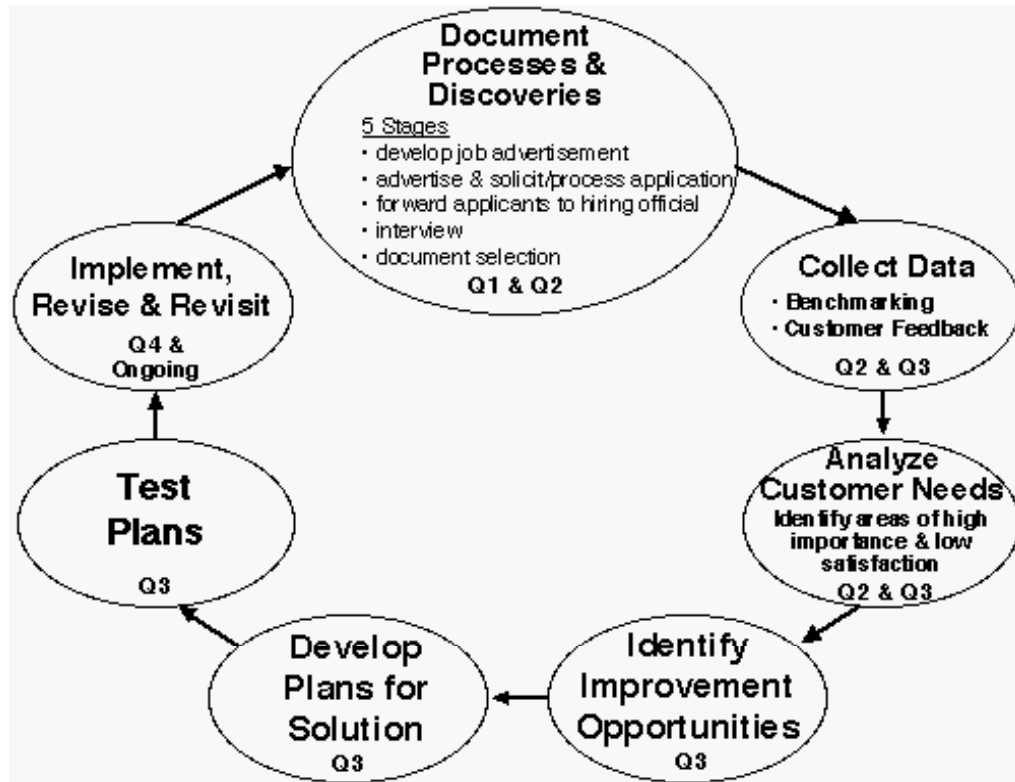


**Figure 6-1. HR Division's PDCA cycle.**

For information on planning and decision making as relates to process management and CQI, see Items 0.1, 2.1, 2.2, 2.3, and 4.2. For information on the kinds of data managers use—including P2E2 data from customers, employees, and operational reviews—see Items 2.1, 2.2, 4.1, 4.2, and 5.2.

Once a process has been designated as needing improvement, based on frequency or number of complaints or on perceived inefficiencies, senior leaders charter a CQI team. Employees are frequently invited to volunteer for such improvement teams, and in some cases employees with specific process knowledge are appointed to the CQI team by management. Much like the Green Zia improvement methodology, the PDCA cycle uses a flow chart to identify key aspects of a process. The CQI team then analyzes problem areas, focusing on root causes and using tools such as a cause-and-effect diagram. Next the CQI team identifies possible alternatives and creates an action plan. Finally, the team selects and implements the most appropriate change and monitors the revised process to ensure the change produces the desired improvement.

The EPI Team, chartered by the HR Staffing group leader, is currently using this process. Figure 6-2 shows the actual project plan of the EPI team. The team responsible for the Otowi GZPP (see Items 3.3 and 7.1) used a variation of this methodology to identify environmental improvements for HR Division's office facility.



**Figure 6-2. EPI Team project plan.**

Results from improvement efforts are communicated to senior leaders at the weekly HR Forum sessions and as part of the Appendix F quarterly assessments. Employees learn about process improvements at the all-hands meetings, group meetings, and through [hr-news@lanl.gov](mailto:hr-news@lanl.gov).

In some cases, HR Division identifies opportunities for improvement, as well as best-practice goals, through formal benchmarking. In the past, the division has benchmarked training priorities with other quality training organizations in the research and development arena. These include AT&T, Motorola, Xerox, IBM, and other DOE facilities. In the recent past, HR Division partnered with Motorola to share and apply industry's human resource's best practices in executive development and training.

## 7 Results

### 7.1 Environmental Results

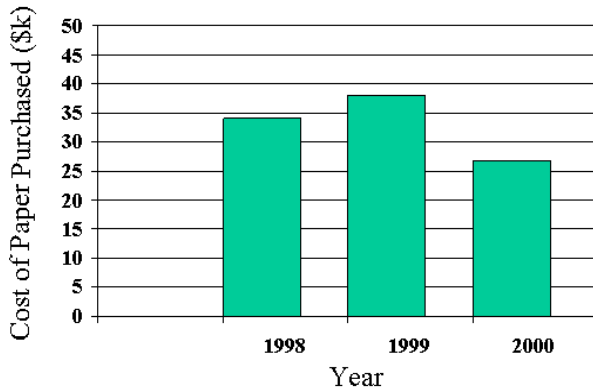
Table 7-1 shows the initiatives considered by HR Division as part of its participation in the Otowi GZPP (see Item 3.3). Some activities were new projects; some made more extensive use of existing LANL programs. HR Division implemented all but two of the initiatives (styrofoam and computer disk recycling).

Figure 7-1 shows the trends in expenditures for paper at HR. The downward trend, 1999-2000, may be linked to the fact that in 1999 HR began filing job resumes and applications electronically, and implemented the online Performance Appraisal system.

Personnel records also now are stored electronically, saving an additional estimated 20,000 pieces of paper annually. The division has also begun an emphasis on two-sided printing.

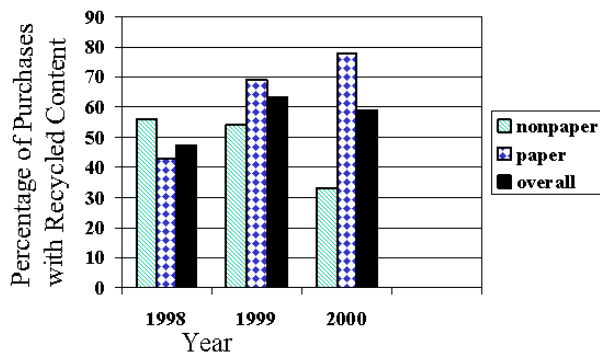
**Table 7-1. Initiatives considered as part of the Otowi Building GZPP.**

Focus Area	Initiatives	New/Existing
Paper Use	<ul style="list-style-type: none"> <li>Wider use of two-sided printers/copiers</li> <li>Recycling of shredded paper</li> <li>Wider use of electronic documents</li> </ul>	Existing Existing Existing
Cardboard Recycle	<ul style="list-style-type: none"> <li>Promote more extensive recycling</li> <li>Use compacting recycling bins</li> </ul>	Existing Existing
Reuse/Recycle of Office Supplies	<ul style="list-style-type: none"> <li>Develop systematic reuse of surplus office supplies</li> </ul>	New
General Recycling	<ul style="list-style-type: none"> <li>Recycle aluminum cans</li> <li>Recycle Styrofoam</li> <li>Recycle computer disks</li> <li>Segregate food-contaminated waste from recyclable waste</li> <li>Include recycling options in planned building upgrades</li> </ul>	Existing New New Existing New
Reuse of Office Equipment	<ul style="list-style-type: none"> <li>Publicize equipment swap web site</li> <li>Make better use of surplus equipment</li> </ul>	Existing Existing
Mail	<ul style="list-style-type: none"> <li>Use Mail Stop A1000 (mail recycle)</li> <li>Use Stop Mail (junk mail elimination)</li> </ul>	Existing Existing
Procurement	<ul style="list-style-type: none"> <li>Make better use of affirmative procurement</li> </ul>	Existing
P2E2 Awareness	<ul style="list-style-type: none"> <li>Develop facility-specific guidelines</li> <li>Schedule P2 lectures</li> <li>Participate in New Mexico Green Zia Environmental Excellence Program</li> </ul>	New Existing New

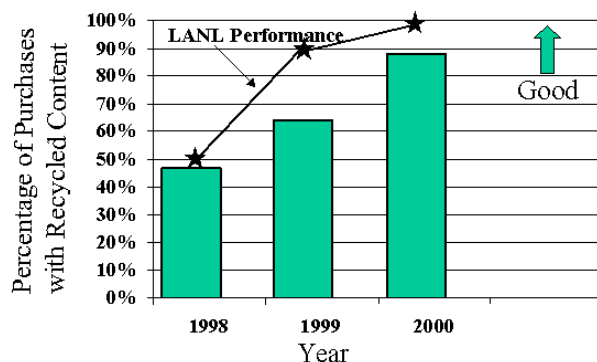


**Figure 7-1. Trends in HR Division expenditures for paper.**

Figures 7-2 and 7-3 show HR Division's performance related to affirmative procurement. This is a LANL-wide effort to purchase products with recycled content. In 1998 the division's overall rate was 47%; in 1999 the rate improved dramatically to 63%; for the year 2000 the rate was 59%.



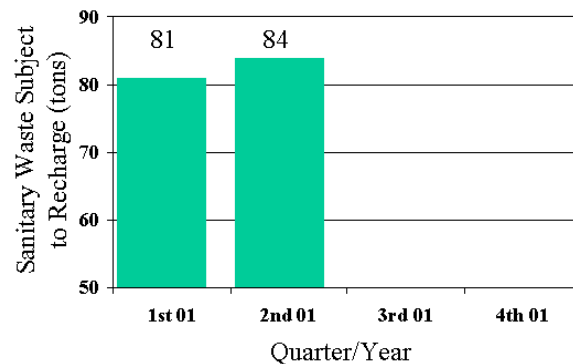
**Figure 7-2. HR Division's purchase of material with recycled content.**



**Figure 7-3. HR Division's affirmative procurement rate compared with that of LANL.**

Figure 7-4 shows the first available baseline measurement on sanitary solid waste generation. The measurement represents sanitary waste collection from

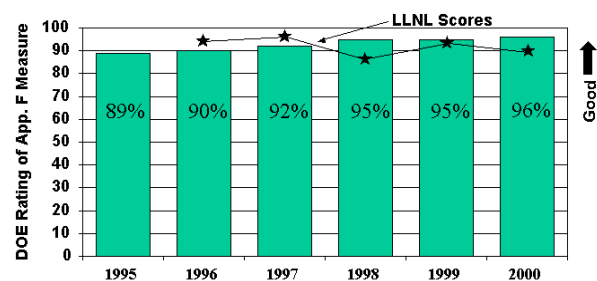
all tenants of Facility Management Unit-81, where the Otowi Building is located. Measurements translate into a recharge (\$657.55 per ton) levied upon the landlord, to support operation of the LANL Material Recycling Facility, brought online in April 2001. LANL does not apportion this recharge by division, but the baseline measurement will nevertheless inform P2-related decision-making among all Facility Management Unit tenants, collectively.



**Figure 7-4. Baseline measurement of sanitary solid waste, Facility Management Unit-81.**

**Note:** The Employee Checkpoint Survey and the Upward Appraisal were not conducted in 2000 because of the Cerro Grande Fire emergency. These evaluations will be resumed in 2001.

Figure 7-5 shows LANL's overall score on the utilities/energy conservation measures of Appendix F. The scores were initially high, have maintained a steadily improving trend, and compare favorably to LLNL scores. As stated in Item 1.1, there is presently no mechanism for breaking out HR's contribution to E2 and utilities conservation at LANL, but the FWO-DF Quality Team's plan to track energy consumption at the Otowi building may well yield feedback on this issue within a year.



**Figure 7-5. LANL's Appendix F scores related to E2 and utilities conservation.**

Figures 7-6 through 7-8 show the division's scores in three areas of the Employee Checkpoint Survey: communication, job satisfaction, and—most relevant to GZPP—safety. Figure 7-9 shows the composite scores for 14 HR Division managers on LANL's Upward Appraisal evaluation (5 is a perfect score). Of the twenty categories evaluated, nine have a direct impact on ES&H performance. For the last three years the scores have generally remained at a steady high level and are very close to the average score for all LANL managers. Table 7-2 provides another view of the data. Given the small variation in scores, it is impossible to establish a statistical trend. In view of the encouraging results from the Employee Checkpoint Survey and the Upward Appraisal, HR now expects—in keeping with the CQI principle—to build on employee confidence in our ES&H record by mounting fresh initiatives that move directly into the P2E2 arena, as stated in Item 5.3.

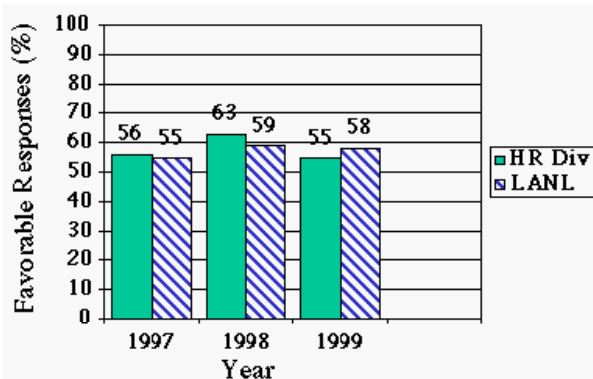


Figure 7-6. HR Division's Employee Checkpoint Scores related to communication.

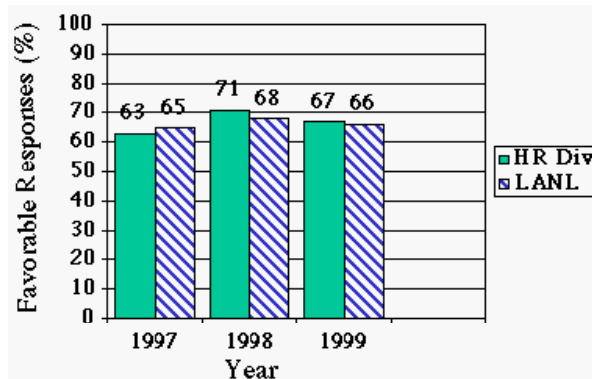


Figure 7-7. HR Division's Employee Checkpoint Scores related to employee job satisfaction.

No Employee Checkpoint Survey was conducted in 2000, due to the tremendous impact of the Cerro Grande Fire on all laboratory operation. The next Employee Checkpoint Survey will be in 2001.

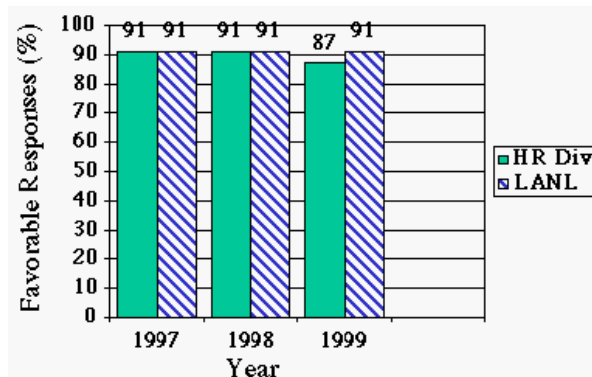


Figure 7-8. HR Division's Employee Checkpoint Scores related to safety.

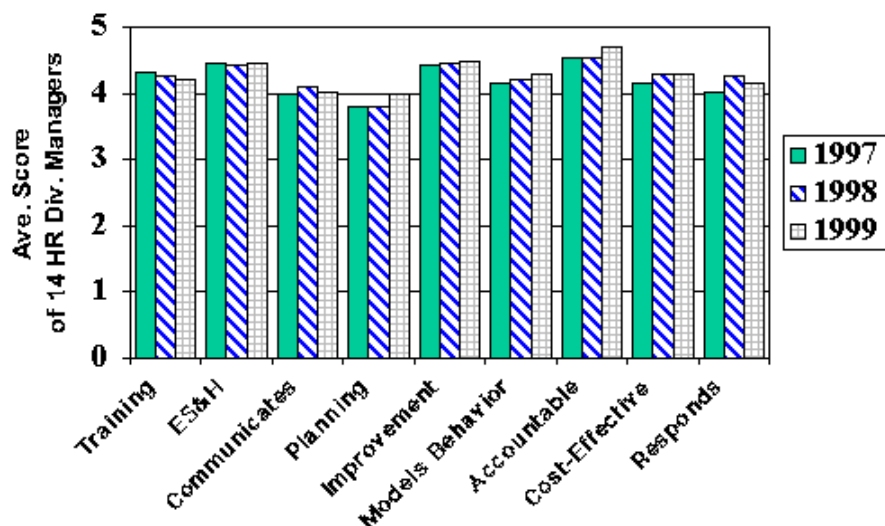
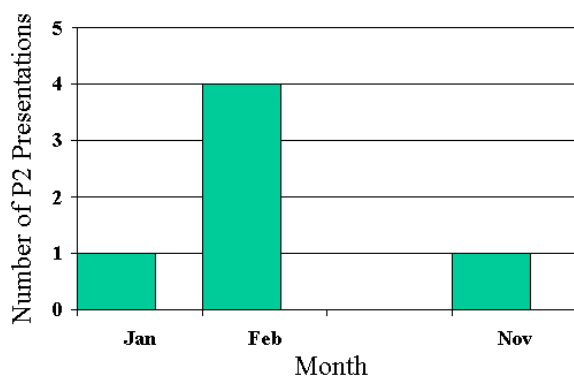


Figure 7-9. Three-year trends for average Upward Appraisal scores of HR Division managers.

**Table 7-2. Average scores for 14 HR Division managers on LANL's Upward Appraisal evaluations.**

Evaluated Characteristic	1997		1998		1999	
	HR	LANL	HR	LANL	HR	LANL
Actively implements ES&H policies/procedures	4.46	4.45	4.41	4.42	4.44	4.49
Communicates openly and honestly with employees	3.98	4.08	4.09	4.01	4.02	4.14
Supports training and development for employees	4.33	4.31	4.27	4.27	4.20	4.33
Involves employees in planning and decision making	3.80	3.77	3.81	3.75	3.99	3.88
Expects employees to continuously improve	4.42	4.33	4.45	4.29	4.49	4.37
Models behavior he/she expects in others	4.16	4.11	4.20	4.07	4.29	4.21
Holds employees accountable for their performance	4.54	4.42	4.53	4.43	4.71	4.47
Promotes cost-effective work practices	4.14	4.11	4.28	4.06	4.29	4.13
Responds constructively to employee ideas and concerns	4.03	4.07	4.26	4.04	4.14	4.12

HR senior leaders have invited ESO to give formal presentations related to P2 and resource conservation. Figure 7-10 shows the number of presentations given to HR Division groups during 2000. About 150 HR personnel attended the presentations.

**Figure 7-10. P2E2/resource conservation presentations to HR Division groups in 2000.**

HR Division closely monitors its injury/illness rate through several measures. Figure 7-11 shows the number of total recordable incidents (TRIs) for the past year. As the figure shows, safety problems are rare. Figure 7-12 shows a rolling 12-month average for TRIs and lost workday cases (LWCs) and compares HR Division's performance to overall LANL performance. HR Division numbers for both categories are generally lower than LANL averages. The number of HR LWCs for 2000 was zero.

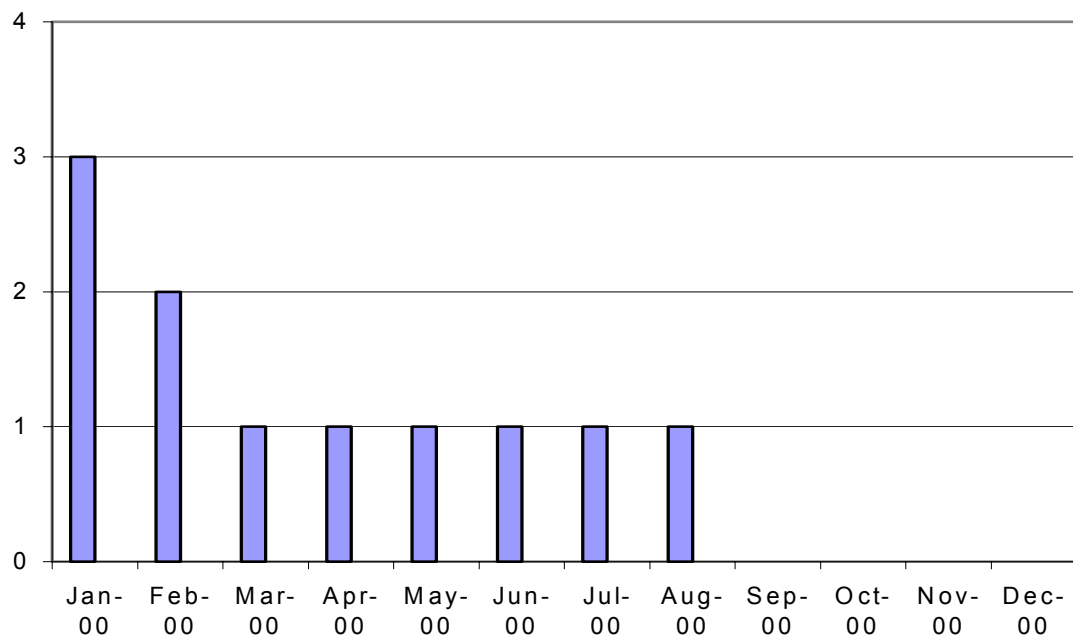


Figure 7-11. TRIs for HR Division in 2000.

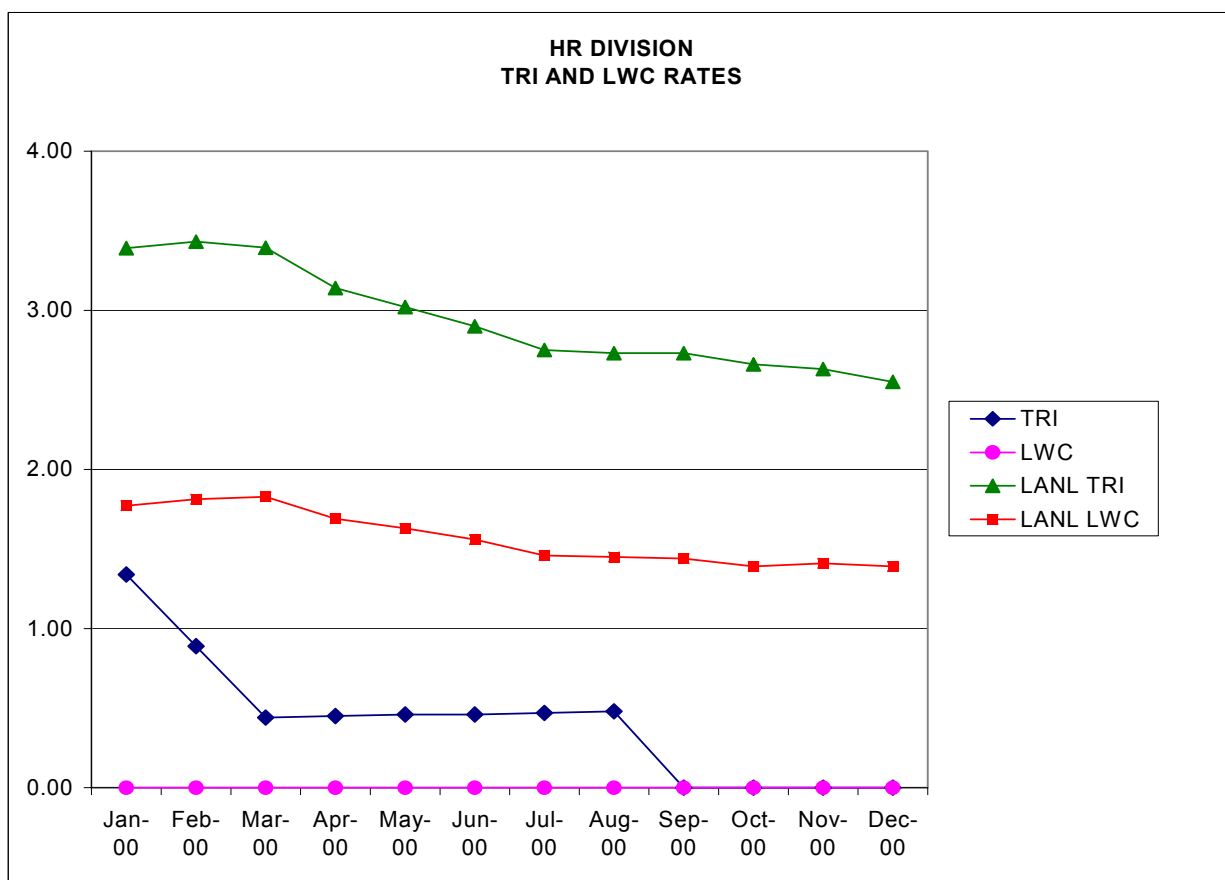
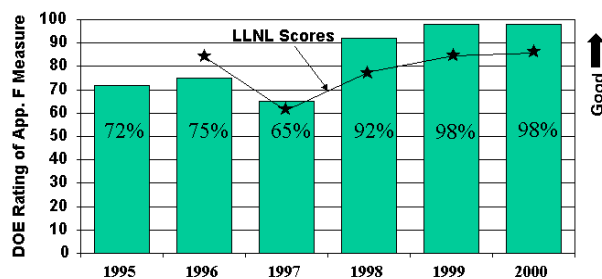


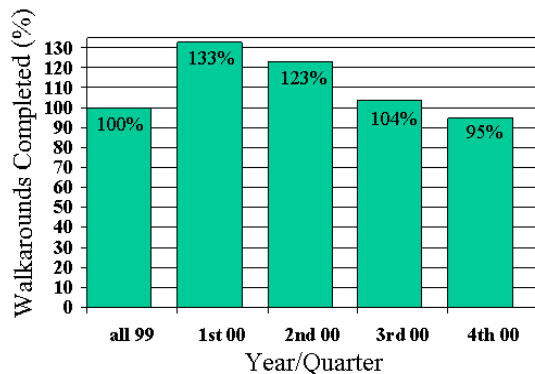
Figure 7-12. Twelve-month rolling average for employee injuries/illnesses in 2000.

HR's enviable TRI and LWC records most likely influenced in a positive way LANL's high Appendix F scores for accident and injury prevention (see Figure 7-13). Finally, Figure 7-14 shows the effectiveness of management safety walkarounds within HR Division. Senior leaders aim to accomplish 100% of the expected walkarounds.

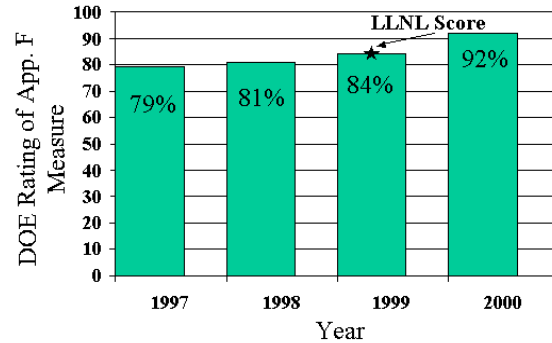
A final measure that HR Division monitors closely relates to operational effectiveness and continuous improvement. The Appendix F performance measure HR Systems and Processes (3.1 in the current modification) reflects the division's ability to deliver services. See Figure 7-15. The results over the last four years show steady improvement, with current performance equivalent to a rating of "excellent" from DOE. Item 7.3 shows sample results from efforts to improve human resource systems.



**Figure 7-13. LANL overall Appendix F scores related to accident/injury prevention.**



**Figure 7-14. Percentage of required HR Division management walkarounds actually completed.**



**Figure 7-15. Appendix F ratings of the HR Systems and Processes performance measure.**

## 7.2 Customer, Supplier, Employee, and Other Results

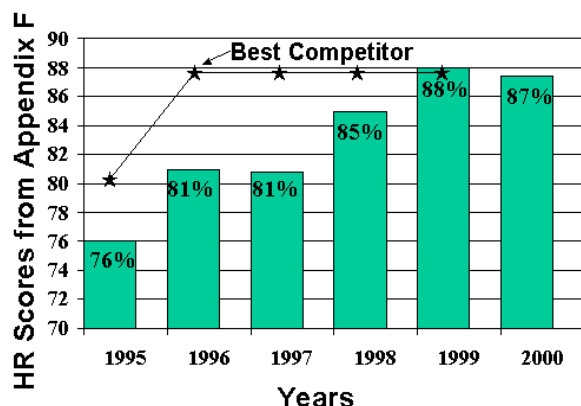
As stated in Item 0.1, Appendix F includes measures to rate the ES&H performance of LANL as a whole but no measures to rate HR's ES&H performance. Appendix F is the single best measure of the Laboratory's performance in the environmental arena and the single best measure of HR's performance in satisfying its customers and other stakeholders. However, there exists no measure to evaluate the impact of HR customer satisfaction on environmental excellence. In terms of overall P2E2 efforts at the Laboratory, HR plays a minor role. At present, LANL's priority is establishing measures to evaluate the impact of customer satisfaction on environmental excellence with respect to other, higher-profile divisions.

HR Division uses the Appendix F Process as a way to identify customer requirements and to gather feedback regarding customer perception of division performance. Figure 7-16 shows total Appendix F scores for all HR performance measures, which in the current modification includes

- compensation programs,
- employment of minorities and women,
- HR systems and processes,
- labor relations,
- strategic alignment of diversity programs,
- workforce excellence.

The figure shows steadily improving scores equivalent to a rating of "excellent" from DOE. HR Division scores are now on a par with best performance as compared with LBNL and LLNL scores for this functional area.

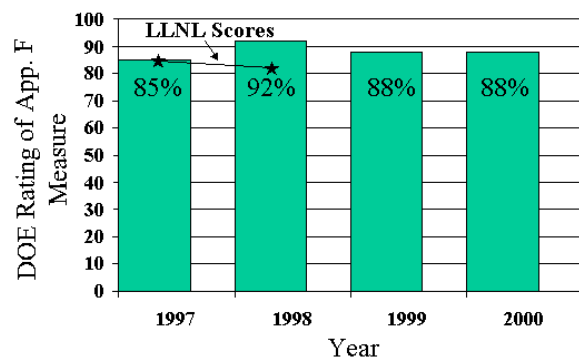




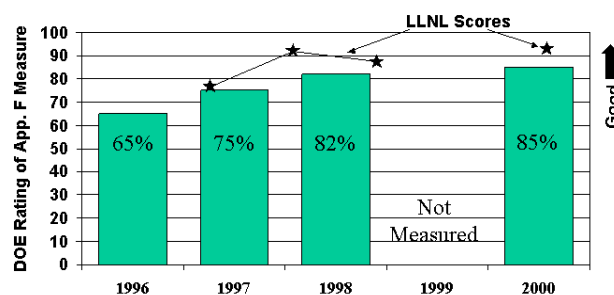
**Figure 7-16. Appendix F ratings of all HR performance measures.**

One specific measure included within the human resources focus area of Appendix F during three years was HR Customer Needs Analysis. Figure 7-17 shows HR's Division's consistent high performance equal to a rating of "excellent" from DOE. The division's scores also compare very favorably with those of LLNL.

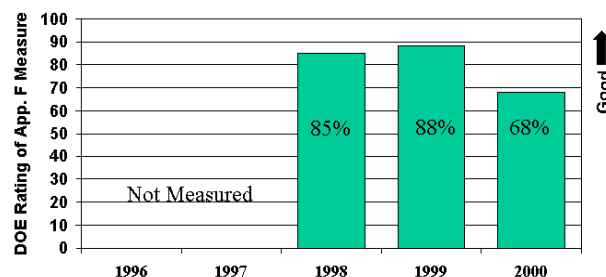
Other key customer results derive from specific measures within Appendix F. Figures 7-18 through 7-20 show overall LANL performance, to which HR Division contributes, for recycling and P2, management safety walkarounds, and supplier performance.



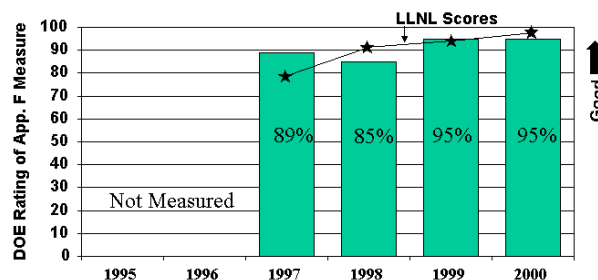
**Figure 7-17. Appendix F ratings of the HR Customer Needs Analysis performance measure.**



**Figure 7-18. Overall LANL Appendix F performance related to recycling and P2E2.**

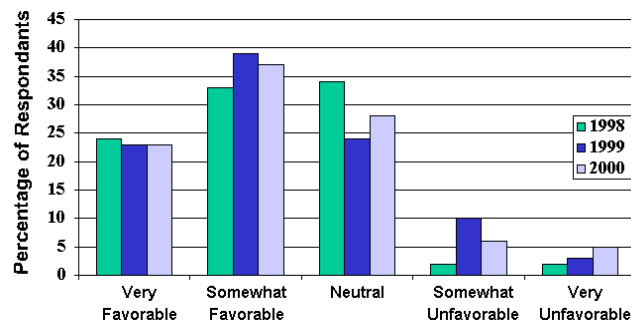


**Figure 7-19. Overall LANL Appendix F performance related to management safety walkarounds.**



**Figure 7-20. Appendix F rating of the LANL Management of Supplier performance measure.**

The community's perception of LANL's environmental performance is generally good. Public surveys conducted between 1996 and 1998 showed that over 65% of New Mexicans had a favorable or at least neutral opinion of the Laboratory in this regard. Other surveys conducted in 1998, 1999, and 2000 showed that during this period, an average of 88% of community leaders had a very favorable, favorable, or at least neutral opinion of the Laboratory's overall performance (see Figure 7-21).



**Figure 7-21. Community leaders' view of LANL.**

Some of the data presented in Item 7.1 to demonstrate environmental performance also provide important information related to employee issues and well-being. For example, Figures 7-6 through 7-8 show employee satisfaction as expressed on the Employee Checkpoint

Survey, and Figure 7-9 and Table 7-2 show upward appraisal results. Figures 7-11 through 7-13 indicate levels of employee well-being related to safety and health.

A final key measurement that HR Division senior leaders monitor to evaluate levels of environmental performance is the result of participation in the New Mexico Green Zia Environmental Excellence Awards Program. Examiner's feedback in connection with the 2000 application forms the baseline against which current performance is measured.

### 7.3 Financial Results

As stated in Item 2.1, because HR's work is carried out mainly in an office setting, initiatives in the P2 arena are not likely to return significant dividends—if "significance" is measured in terms of our key business factors. However, even though money is not our primary motivation in promoting the environmental ethic, it is nevertheless a useful exercise to measure financial results.

HR Division has had a mechanism in place since 1998 to track the financial results of environmental performance as relates to reduced paper purchase. Since 1999, the division has had a mechanism to track the financial results of environmental performance as relates to reduced lost work days.

Figure 7-22 shows the cost savings in paper purchases HR anticipates as a result of greater use of electronic documents and two-sided copying. This savings is expected to exceed \$5000 in 2001.

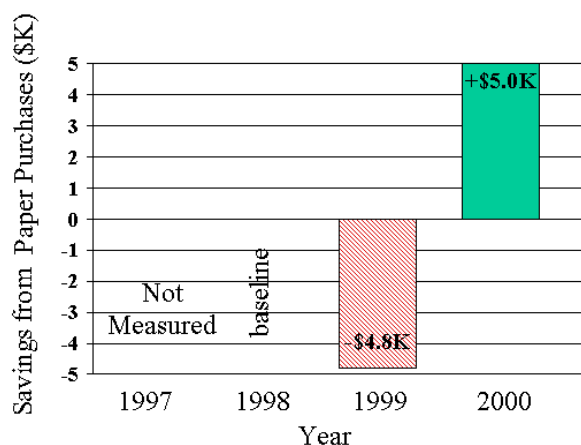


Figure 7-22. Cost savings in paper purchases due to P2 activities.

The division is in the process of realizing major cost saving from its EPI project. Figure 7-23 shows the dramatic improvement in the hiring process now that the process improvements are fully implemented.

Because in a typical year LANL may advertise and fill up to 500 positions, this cost savings, estimated to be between \$6K and \$12K per job, may total between \$3M and \$6M annually. Figure 7-24 shows concurrent time and efficiency savings the division realizes from the EPI project.

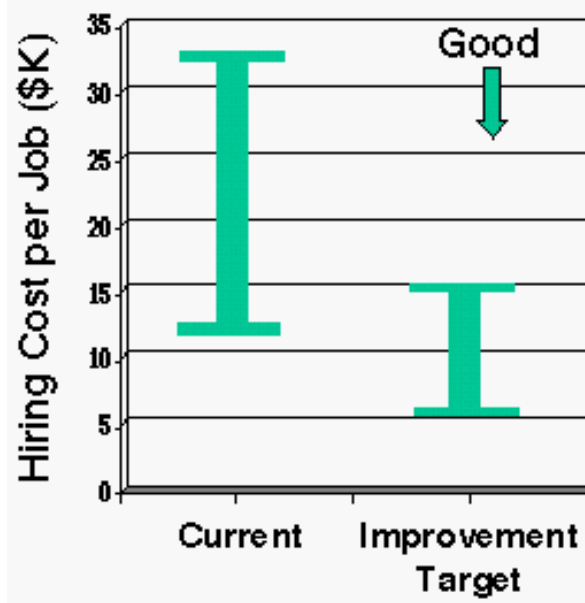


Figure 7-23. HR Division cost ranges for filling job vacancies.

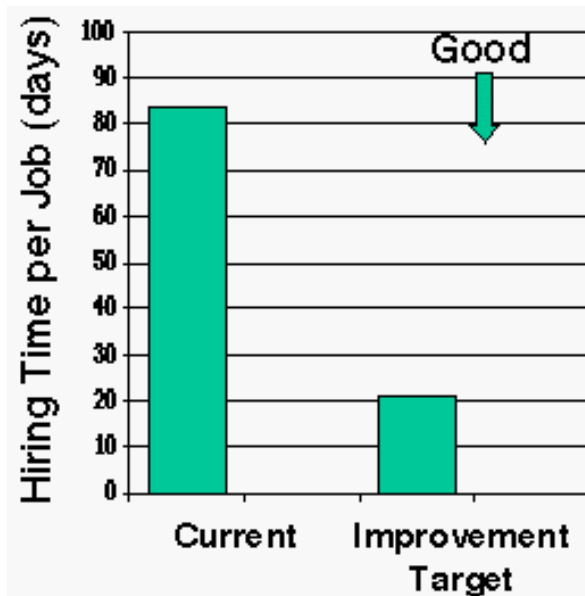


Figure 7-24. HR Division time savings from the EPI project.

## Acronyms

BUS	Business Operations Division
CQI	continuous quality improvement
DF	Distributed Facilities Group
DOE	Department of Energy
E	Environmental Science and Waste Technology Division
EAP	Employee Assistance Program
EPA	Environmental Protection Agency
EPI	Employment Process Improvement
ESH	Environment, Safety, and Health Division
ES&H	environment, safety, and health
ESO	Environmental Stewardship Office
E2	energy efficiency
FWO	Facilities and Waste Operations Division
GZPP	Green Zia Pilot Project
HR	Human Resources Division
ISM	Integrated Safety Management
LANL	Los Alamos National Laboratory
LBNL	Lawrence Berkeley National Laboratory
LLNL	Lawrence Livermore National Laboratory
LWC	lost workday cases
NRC	Nuclear Regulatory Commission
OSHA	Occupational Safety and Health Administration
P2	pollution prevention
PDCA	Plan-Do-Check-Act
TRI	total recordable incidents
UC	University of California
VOC	Voice of the Customer